# BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF HAWAII

In the Matter of the Application of

HAWAIIAN ELECTRIC COMPANY, INC.

For Approval of Rate Increases and Revised Rate Schedules and Rules

**DOCKET NO. 2006-0386** 

#### MOTION TO ADJUST INTERIM INCREASE

#### MEMORANDUM IN SUPPORT OF MOTION

#### EXHIBITS 1 - 4

#### **AND**

#### **CERTIFICATE OF SERVICE**

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**DOCKET NO. 2006-0386** 

For Approval of Rate Increases and Revised Rate Schedules and Rules

#### MOTION TO ADJUST INTERIM INCREASE

Hawaiian Electric Company, Inc. ("HECO" or the "Company") respectfully moves the Commission to adjust the interim increase for the 2007 test year granted in Interim Decision and Order No. 23749 ("Interim D&O 23749"), issued October 22, 2007, in this proceeding (Docket No. 2006-0386), in order to tie the interim increase to the new rates being implemented in Docket No. 04-0113 (HECO's 2005 test year rate case). The amount of the interim revenue requirement for the 2007 test year stipulated to by the parties in Docket No. 2006-0386 would remain the same, but the amount of the interim increase over the revenues from the new base rates in Docket No. 04-0113 would need to be adjusted to obtain the stipulated revenue requirement of \$1,480,454,000<sup>2</sup> for the 2007 test year.<sup>3</sup>

By Stipulated Settlement Letter filed on September 6, 2007, the parties agreed that the amount of the interim rate increase for the 2007 test year to which HECO is probably entitled

The parties in Docket No. 04-0113 and Docket No. 2006-0386 are HECO, the Division of Consumer Advocacy of the Department of Commerce and Consumer Affairs ("Consumer Advocate") and the Department of the Navy on behalf of the Department of Defense ("DOD").

<sup>&</sup>lt;sup>2</sup> Interim D&O 23749, Exhibit A, page 1 (Interim Rates, Total Operating Revenues).

As more fully discussed in the Memorandum in Support of Motion attached hereto, the parties have agreed to increase the stipulated revenue requirement from \$1,480,454,000 to \$1,480,538,000, or \$84,000, in order to incorporate into the interim increase calculation the Commission's recent adoption of interest synchronization in Docket No. 04-0113. See Exhibits 1 and 3.

under Hawaii Revised Statutes ("HRS") §269-16(d) is \$69,997,000 over revenues at current effective rates<sup>4</sup> (and \$127,293,000 over revenues at present rates<sup>5</sup>).<sup>6</sup> (See Interim D&O 23749 at 8.) Revenues at "current effective rates" are revenues from the base rates in effect prior to Docket No. 04-0113, plus the interim rate increase approved by the Commission in Interim Decision and Order No. 22050 ("Interim D&O 22050"), issued on September 27, 2005, in Docket No. 04-0113, and the interim surcharge for distributed generation ("DG") fuel and trucking and low sulfur fuel oil ("LSFO") trucking ("DG/LSFO Fuel and Trucking Interim Surcharge") authorized in Order No. 23377 (April 23, 2007) in Docket No. 04-0113. (Interim D&O 23749 at 8 n.10.) Revenues at "present rates" are revenues from the base rates in effect prior to Docket No. 04-0113, without including the interim rate increase and interim surcharge revenues. (Interim D&O 23749 at 8 n.11.) The interim increase of \$69,997,000 over revenues at current effective rates and the interim increase of \$127,293,000 over revenues at present rates result in the same level of interim revenue requirement (\$1,480,454,000).

By Interim D&O 23749 in Docket No. 2006-0386, the Commission approved, on an interim basis, HECO's request to increase its rates to such levels as would produce, in the aggregate, \$69,997,000 in additional revenues, or 4.96 per cent over revenues at current effective rates for a normalized 2007 test year. (Interim D&O 23749 at 1.) Interim D&O 23749 recognized that the parties also agreed that the "final rates set in Docket No. 04-0113 may impact revenues at current effective rates and at present rates, and that the amount of the stipulated interim rate increase should be adjusted when the final rates are set to take into account any such changes." (Interim D&O 23749 at 8; see Stipulated Settlement Letter at 3.)

<sup>4</sup> HECO 2007 Test Year Rate Case – Statement of Probable Entitlement, Exhibit 1, page 1.

<sup>&</sup>lt;sup>5</sup> HECO 2007 Test Year Rate Case – Statement of Probable Entitlement, Exhibit 2, page 1.

Pursuant to the Stipulated Settlement Letter, on September 6, 2007, HECO filed a Statement of Probable Entitlement that reflected the parties' stipulated agreements.

The amount of the interim increase over the final rates to be implemented in Docket

No. 04-0113 that is necessary to produce the stipulated level of interim revenue requirement in

Docket No. 2006-0386 is \$77,783,000 (Exhibit 3 of this document, page 1). .

In addition, given the Commission's decision in Docket No. 04-0113 to adopt interest

synchronization as the mechanism for determining interest expense in HECO's 2005 test year

rate case, the parties agree that interest synchronization should also be used for the purposes of

calculating the interim adjustment requested in this motion. The revenue requirement impact of

incorporating interest synchronization for the adjustment to the 2007 test year interim increase is

\$84,000. Therefore, HECO respectfully requests that the Commission approve an adjusted 2007

test year rate case interim increase of \$77,867,000 over revenues at the final rates implemented

in Docket No. 04-0113, to be effective on the same date as the final rates in Docket No. 04-0113

(Exhibit 1 of this document, page 1).

This motion is based on the Memorandum in Support of Motion attached hereto, and the

entire record herein. The Consumer Advocate and the DOD have reviewed the calculation of the

adjusted interim rate increase, and agree that it has been correctly calculated. HECO does not

request a hearing on this Motion.

DATED: Honolulu, Hawaii, May 21, 2008.

PETER Y. KIKUTA

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Attorneys for

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HAWAIIAN ELECTRIC COMPANY, INC.

# BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF HAWAII

In the Matter of the Application of HAWAIIAN ELECTRIC COMPANY, INC.

**DOCKET NO. 2006-0386** 

For Approval of Rate Increases and Revised Rate Schedules and Rules

#### MEMORANDUM IN SUPPORT OF MOTION

Hawaiian Electric Company, Inc. ("HECO" or "Company") respectfully submits this Memorandum in support of its Motion to adjust the interim increase for the 2007 test year granted in Interim Decision and Order No. 23749 ("Interim D&O 23749"), issued October 22, 2007, in this proceeding (Docket No. 2006-0386), in order to tie the interim increase to the new rates being implemented in Docket No. 04-0113. The amount of the interim revenue requirement for the 2007 test year stipulated to by the parties in Docket No. 2006-0386 remains the same, but the amount of the interim increase over the revenues from the new base rates in Docket No. 04-0113 must be adjusted to obtain the stipulated revenue requirement of \$1,480,454,000² in the 2007 test year.

The amount of the interim increase over the final rates to be implemented in Docket No. 04-0113 that is necessary to produce the stipulated level of interim revenue requirement in Docket No. 2006-0386 is \$77,783,000 (Exhibit 3 of this document, page 1). In addition, given

The parties in Docket No. 04-0113 and Docket No. 2006-0386 are HECO, the Division of Consumer Advocacy of the Department of Commerce and Consumer Affairs ("Consumer Advocate") and the Department of the Navy on behalf of the Department of Defense ("DOD").

<sup>&</sup>lt;sup>2</sup> Interim D&O 23749, Exhibit A, page 1 (Interim Rates, Total Operating Revenues).

the Commission's decision in Docket No. 04-0113 to adopt interest synchronization as the mechanism for determining interest expense in HECO's 2005 test year rate case (Order No. 24068, page 11, Decision and Order No. 24171, page 100), the parties agree that interest synchronization should also be used for the purposes of calculating the interim adjustment requested in this motion. The revenue requirement impact of incorporating interest synchronization for the adjustment to the 2007 test year interim increase is \$84,000. Therefore, HECO respectfully requests that the Commission approve an adjusted 2007 test year rate case interim increase of \$77,867,000 over revenues at the final rates implemented in Docket No. 04-0113, to be effective on the same date as the final rates in Docket No. 04-0113 (Exhibit 1 of this document, page 1).

#### I. BACKGROUND

#### A. DOCKET NO. 04-0113 - HECO 2005 TEST YEAR RATE CASE

On November 12, 2004, HECO filed its application, direct testimonies, exhibits and workpapers for a general rate increase in a 2005 normalized test year in Docket No. 04-0113. On September 16, 2005, the parties filed a Stipulated Settlement Letter that settled all but three issues in this proceeding: (1) whether \$78,791,000 of a prepaid pension asset should be included in rate base, (2) whether \$750,000 for conservation informational advertising expenses should be included in the 2005 test year revenue requirement and (3) whether interest synchronization should be used to determine interest expense for the computation of income taxes. (HECO 2005 Test Year Rate Case – Stipulated Settlement Letter, filed September 16, 2005, Exhibit I, Exhibit II, pages 5, 8.)

On September 27, 2005, the Commission issued Interim Decision and Order No. 22050

The parties agreed that the exclusion of all or a portion of the prepaid pension asset from rate base will also require a corresponding adjustment to the accumulated deferred income tax ("ADIT") reserve. The portion of ADIT associated with the prepaid pension asset amounted to \$28,483,000.

("Interim D&O 22050"), which allowed HECO to increase its rates on an interim basis by \$53,288,000 for the 2005 test year. (Interim D&O 22050 at 13.) It stated that for the purposes of this interim decision and order, the Commission found that HECO was probably entitled to include the \$78,791,000 in prepaid pension asset in rate base, with a corresponding adjustment of \$28,483,000 to the ADIT reserve (at 9). Page 1 of Exhibit A of Interim D&O 22050 specified a test year revenue requirement of \$1,274,885,000. On September 28, 2005, HECO filed its tariffs to implement a surcharge for the interim increase, effective that day.

By Order No. 23377, issued April 23, 2007, the Commission allowed HECO to establish and implement a new and separate interim surcharge to recover its additional distributed generation ("DG") and low sulfur fuel oil ("LSFO") costs, incurred on or after the effective date of the new and separate interim surcharge ("DG/LSFO Fuel and Trucking Interim Surcharge"), for the period that HECO's interim rates are applicable. On April 30, 2007, HECO filed the proposed Interim Surcharge tariff sheet, and related updated tariff index sheet, with an effective date of May 1, 2007.

#### B. DOCKET NO. 2006-0386 - HECO 2007 TEST YEAR RATE CASE

On December 22, 2006, HECO filed its application, direct testimonies, exhibits and workpapers in Docket No. 2006-0386 for a general rate increase for a normalized 2007 test year. On September 6, 2007, the parties filed a HECO 2007 Test Year Rate Case – Stipulated Settlement Letter documenting the agreements reached between the parties. The parties reached agreement on all but two issues: (1) whether the Company's pension asset should be included in rate base, 4 and (2) whether interest synchronization should be used to determine the interest

HECO proposed to include \$59,405,000 of pension asset in the test year average rate base. The portion of the Accumulated Deferred Income Taxes ("ADIT") related to the pension asset amounted to \$23,114,000. The Parties agreed that the exclusion of all or a portion of the pension asset in rate base will also require corresponding adjustment to ADIT. The Consumer Advocate and the DOD opposed the inclusion of HECO's pension asset in rate base. For purposes of the interim decision, the Parties

expense deduction for computing the test year income tax expense. (Stipulated Settlement Letter at 1.) The parties agreed that these issues need not be addressed in an evidentiary hearing and that the parties may file proposed findings of fact and conclusions of law<sup>5</sup> on the pension asset issue only.<sup>6</sup>

The parties agreed that the amount of the interim rate increase to which HECO was probably entitled was \$69,997,000 over revenues at current effective rates and \$127,293,000 over revenues at present rates. (See Interim D&O 23749 at 8.) Revenues at "current effective rates" for the 2007 test year, based on the stipulated results of operations for the interim, are revenues from the base rates in effect prior to Docket No. 04-0113 (HECO's 2005 test year rate case)<sup>7</sup>, plus the interim rate increase approved by the Commission in Interim D&O 22050 in Docket No. 04-0113, and the DG/LSFO Fuel and Trucking Interim Surcharge authorized in Order No. 23377 (April 23, 2007) in Docket No. 04-0113. (Interim D&O 23749 at 8 n.10.) Revenues at current effective rates totaled \$1,410,457,000. (HECO's Statement of Probable Entitlement at Exhibit 1, page 1.) The difference between the stipulated interim revenue requirement (\$1,480,454,000) and the revenues at current effective rates (\$1,410,457,000) equal the interim rate increase of \$69,997,000 over revenues at current effective rates. (Id.)

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agreed to exclude the pension asset and related ADIT from rate base (Interim Decision and Order No. 23749, page 5). The parties agreed to address the issue in their respective proposed findings of fact and conclusions of law and responses to proposed findings of fact and conclusions of law, based on the record in this proceeding and agreed that further examination of the issue at an evidentiary hearing was unnecessary. (HECO 2007 Test Year Rate Case – Stipulated Settlement Letter, Exhibit 1, pages 20-21.)

In Order No. 23612 filed on August 24, 2007, the Commission modified the parties' proposed Procedural Schedule by requiring the filings of proposed findings of fact and conclusions of law in lieu of opening and reply briefs. As a result, the settlement letter reflects the modified procedural steps reflected in Order No. 23612.

<sup>&</sup>lt;sup>6</sup> The Parties also have agreed on all but one issue affecting rate design.

The "base rates" in effect prior to Docket No. 04-0113 include the base rates set in Docket No. 7766 (HECO's 1995 test year rate case), as adjusted by the ECAC and the AES sur-credit. The AES sur-credit was implemented based on the annual reduction in capacity payments to AES Hawaii, Inc. ("AES Hawaii") made pursuant to Amendment No. 2 to Power Purchase Agreement between AES Hawaii and HECO, dated May 8, 2003 ("Amendment No. 2"), which reduced the payment rate for HECO's capacity payments to AES Hawaii. Amendment No. 2 was approved by Decision and Order No. 20292, issued July 1, 2003, in Docket No. 03-0126, as clarified by Order No. 20310, issued July 9, 2003.

Revenues at "present rates" for the 2007 test year are revenues from the base rates in effect prior to Docket No. 04-0113, without including the interim rate increase and interim surcharge revenues. (Interim D&O 23749 at 8 n.11.) Revenues at present rates totaled \$1,353,159,000. The difference between the stipulated interim revenue requirement (\$1,480,454,000) and the revenues at present rates equal the interim rate increase of \$127,293,000 over revenues at present rates.

The parties agreed that among other things, the settlement eliminated the need for HECO's rebuttal testimonies and evidentiary hearings. (Stipulated Settlement Letter at 2.) The parties also agreed that the final rates set in Docket No. 04-0113 may impact revenues at current effective rates and at present rates, and that the amount of the stipulated interim rate increase for the HECO 2007 test year rate case will be adjusted to take into account any such changes. (Stipulated Settlement Letter at 3.)

The agreed upon interim increase of \$69,997,000 over revenues at current effective rates was based on electric sales revenues of \$1,406,573,000 at current effective rates (HECO 2007 Test Year Rate Case – Statement of Probable Entitlement, Exhibit 1, page 1), which included \$51,885,200 of revenues from the surcharge for the interim increase in the 2005 test year rate case, as was included in the Company's June 2007 Update, HECO T-3, page 4 (Supplemental); and Exhibit 2, page 2 of this document. The parties agreed with the Consumer Advocate's position that the test year electric sales revenues at current effective rates should include twelve months of revenues from the DG/LSFO Fuel and Trucking Interim Surcharge (rather than eight months as originally proposed by the Company). Thus, the revenues from this surcharge for the 2007 test year were increased to \$5,358,200 (HECO 2007 Test Year Rate Case - August 2007 Supplement, HECO T-3, Attachment 1). The agreed upon electric sales revenues at current

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effective rates also included a \$694,870 increase to energy cost adjustment clause ("ECAC") revenues resulting from an adjustment to test year purchased power expenses. (Exhibit 2, page 1; HECO 2007 Test Year Rate Case – Stipulated Settlement Letter, Exhibit 1, page 3).

The \$57,296,000 difference between the revenues at present rates of \$127,293,000 and the revenues at current effective rates of \$69,997,000 was due to the \$51,885,200 of revenues from the surcharge for the interim increase in the 2005 test year rate case, the \$5,358,200 from the DG/LSFO Fuel and Trucking Interim Surcharge, and approximately \$53,000 of late payment charge revenues associated with the 2005 test year rate case interim surcharge and DG/LSFO Fuel and Trucking Interim Surcharge revenues.<sup>8</sup>

For purposes of an <u>interim</u> decision in the 2007 test year rate case, the parties agreed to <u>exclude</u> the pension asset and related ADIT from rate base. (HECO 2007 Test Year Rate Case – Stipulated Settlement Letter, Exhibit 1, page 21.) Thus, the proposed interim increase (to which the parties agreed HECO was probably entitled) of \$69,997,000 over revenues at current effective rates and \$127,293,000 over revenues at present rates (and the resulting revenue requirement of \$1,480,454,000 for the 2007 test year<sup>9</sup>) reflected the <u>exclusion</u> of the pension asset and associated ADIT from rate base.

Pursuant to the Stipulated Settlement Letter, on September 6, 2007, HECO filed a Statement of Probable Entitlement that reflected the parties' stipulated agreements. Thus, HECO requested the identical interim rate increase to which the parties agreed in the Stipulated Settlement Letter – i.e., \$69,997,000 over revenues at current effective rates and \$127,293,000

The parties agreed to multiplying a late payment charge factor of .095% to the electric sales revenues at interim rates to determine the late payment charges at interim rates (HECO 2007 Test Year Rate Case – Stipulated Settlement Letter, Exhibit 1, page 2).

<sup>&</sup>lt;sup>9</sup> HECO 2007 Test Year Rate Case – Statement of Probable Entitlement, Exhibit 1, page 1. There is a slight difference in the revenue requirement in the current effective rates scenario compared to the present rates scenario due to rounding. Shown above is the revenue requirement in the current effective rates scenario. The revenue requirement in the present rates scenario was \$1,480,452,000 (HECO 2007 Test Year Rate Case – Statement of Probable Entitlement, Exhibit 2, page 1).

over revenues at present rates, based on a revenue requirement of \$1,480,454,000 for the 2007 test year.

On October 22, 2007, the Commission issued Interim D&O 23749, approving an increase in revenues, on an interim basis, of \$69,997,000, or 4.96 per cent over revenues at current effective rates for a normalized 2007 test year. (Interim D&O 23749 at 1.) Page 1 of Exhibit A reflected the associated revenue requirement of \$1,480,454,000. As indicated on page 1 of Exhibit B of Interim D&O 23749, no dollars for the pension asset were included in rate base.

On October 22, 2007, HECO filed its revised tariff sheets reflecting interim rate increase surcharges, implementing an interim revenue increase of \$69,930,600. On October 26, 2007, HECO filed corrected tariff sheets in order to correct an error.<sup>10</sup>

#### C. REVISED RESULTS OF OPERATIONS FOR THE 2005 TEST YEAR

On October 22, 2007, the Commission issued Proposed Decision and Order No. 23748 for the HECO 2005 test year rate case (Docket No. 04-0113). On October 25, 2007, the Commission issued Amended Proposed Decision and Order No. 23768 ("Amended Proposed D&O") which superseded Proposed Decision and Order No. 23748. The Amended Proposed D&O indicated that the prepaid pension asset (net of an adjustment to ADIT) would not be included in rate base, and that the \$750,000 of conservation information advertising expenses would <u>not</u> be included in the test year revenue requirement (at 98).

On October 31, 2007, the DOD filed its Exceptions to the Amended Proposed D&O. On November 6, 2007, the Consumer Advocate filed a letter that notified the Commission that the

The rate schedule percentage increases should have been applied to base revenues, which include customer, demand, energy, and other charges specified on the rate schedule tariff sheets. Base revenues exclude surcharges and adjustments, including the energy cost adjustment and the interim rate increase. The interim rate increase percentages filed on October 22, 2007 were determined on an estimate of base revenues that inadvertently included the 2005 interim rate increase. HECO corrected the applicable 2007 interim rate increase percentages effective October 26, 2007. The corrected percentages resulted in no change to the interim revenue increase of \$69,930,600.

Consumer Advocate was not filing exceptions to the Amended Proposed D&O. On November 7, 2007, HECO filed a letter that notified the Commission that HECO was not filing exceptions to the Amended Proposed D&O.

On March 4, 2008, the Commission issued Order No. 24068 in Docket No. 04-0113, adopting the interest synchronization method as the mechanism for computing interest expense in the HECO 2005 test year rate case proceeding. The order required the parties to file stipulated revised results of operation schedules to reflect amounts consistent with the Commission's decisions in this order and the Amended Proposed D&O, for the Commission's review and approval, and for subsequent incorporation into the Commission's final decision and order in that docket. On March 28, 2008, the parties filed stipulated revised results of operations for the 2005 test year that excluded the pension asset and associated ADIT from rate base, included an interest expense deduction computed using the interest synchronization method for the purpose of calculating income tax expense for the 2005 test year, and incorporated adjustments for demand-side management ("DSM") expenses and field collection charge revenues to be consistent with the findings specified in the Amended Proposed D&O. Page 1 of Exhibit 1 of the stipulated revised results of operations reflected a revenue increase of \$44,862,000 (revenue requirement of \$1,266,459,000) compared to the interim award of \$53,288,000 (revenue requirement of \$1,274,885,000) approved in Interim D&O 22050. The difference between the revenue requirement for the revised results of operations and the interim results of operations reflected in Interim D&O 22050 can be attributed to the factors shown in the table below:

TABLE 1
FACTORS IMPACTING
2005 TEST YEAR REVENUE REQUIREMENT
(000's)

	Revenue Requirement
Interim Decision and Order No. 22050	\$1,274,885
Exclusion of Pension Asset (Net of ADIT) from Rate Base	(7,547)
Amended Proposed D&O 23768	1,267,338
DSM/Field Collection Charge Adjustment	(1,147)
Exhibit 4 of Revised Results of Operations	1,266,191
Incorporate Interest Synchronization	268
Exhibit 1 of Revised Results of Operations	\$1,266,459

As shown above, the exclusion of the prepaid pension asset (net of ADIT) from rate base accounted for \$7.5 million of the difference in revenue requirement between Interim D&O 22050 and the revised results of operations. Reduction of DSM expenses from the 2005 test year revenue requirement for recovery through the DSM component of the Integrated Resource Planning Cost Recovery Provision ("DSM Surcharge") and the reduction of field collection charge revenues accounted for another \$1.15 million in reduced revenue requirement. The use of interest synchronization to determine the interest expense deduction for the computation of income taxes increased the 2005 test year revenue requirement by \$268,000.

On May 1, 2008, the Commission issued the final decision and order for the HECO 2005 test year rate case – Decision and Order No. 24171 ("Final D&O"). The Final D&O authorized a revenue requirement of \$1,266,459,000.

#### D. ADJUSTED INTERIM INCREASE

Calculated revenues at the final rates implemented in Docket No. 04-0113 for the 2007

test year total \$1,402,671,000. (Exhibit 1 of this document, page 1.) The difference between the stipulated interim revenue requirement (\$1,480,454,000) and the revenues at the final rates implemented in Docket No. 04-0113 (\$1,402,671,000) equal an adjusted interim rate increase of \$77,783,000. The incorporation of interest synchronization adds another \$84,000 to the 2007 test year revenue requirement and increases the adjusted interim rate increase to \$77,867,000 (Exhibit 1, page 1 of this document).

Revenues at the final rates implemented in Docket No. 04-0113 for the 2007 test year (\$1,402,671,000) are lower than revenues at current effective rates (\$1,410,457,000), because the final rate increase of \$44,862,000 approved in Docket No. 04-0113 was lower than the interim rate increase of \$53,288,000 approved in Interim D&O 22050 for that proceeding, and certain DSM costs were removed from base rates and are to be recovered through the DSM Surcharge. The final rate increase of \$44,862,000 reflects the exclusion of the prepaid pension asset that was included in rate base for purposes of the interim increase in Docket No. 04-0113, offset to some extent by the inclusion of interest synchronization. The remaining difference results from removing the DSM costs from base rates and reducing field collection charge revenues. Table 1 above shows the impact of these effects on the 2005 test year revenue requirement.

#### II. DISCUSSION

As a result of the differences between the revenues at "current effective rates" and the revenues at final rates implemented in Docket No. 04-0113 (which is primarily due to the disallowance of the pension asset from rate base in the Final D&O in the HECO 2005 test year rate case), an adjustment to the interim increase for the 2007 test year rate case will be necessary to allow the Company the opportunity to generate the level of revenues needed to earn its authorized rate of return and to avoid a double counting of the pension asset disallowance. The

parties in the 2007 test year rate case anticipated the possible need for an adjustment and included the following provision in the Stipulated Settlement Letter, executed by the parties and filed on September 6, 2007 (at 3):

The Parties agree that the amount of the Interim Rate Increase to which HECO is probably entitled under §269-16(d) of the Hawaii Revised Statutes is \$69,997,000 over revenues at current effective rates <sup>11</sup> (and \$127,293,000 over revenues at present rates <sup>12</sup>). The Parties also agree that the final rates set in Docket No. 04-0113 may impact revenues at current effective rates and at present rates, and that the amount of the stipulated interim rate increase will be adjusted to take into account any such changes.

The interim increase for the HECO 2007 test year rate case must be adjusted from \$69,997,000 to \$77,867,000 (Exhibit 1, page 1 of this document), and should be made effective on the same day as the effective date of the final rates for the HECO 2005 test year rate case. In the discussion below, the Company will further explain why this adjustment is necessary.

# A. ALTHOUGH THE REVENUE AWARD FOR THE 2005 TEST YEAR HAS CHANGED, HECO'S 2007 TEST YEAR REVENUE REQUIREMENT WOULD NOT CHANGE EXCEPT FOR THE IMPACT OF INTEREST SYNCHRONIZATION

The test year is the time period over which a utility's revenue requirement is evaluated in a rate case. Thus, the revenue requirement approved in a particular test year represents the level of revenues the utility needs to realize in order to have an opportunity to recover the normalized level of operating expenses and earn the authorized rate of return on rate base for that year. The test year provides a snap shot of the utility's revenues and costs over the twelve month period and investments at the end of that period. As a result, the revenue requirement for different test

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Revenues at current effective rates are revenues from base rates plus the interim rate increase approved by the Commission in Interim Decision and Order No. 22050 in HECO's 2005 test year rate case, Docket No. 04-0113, and the interim surcharge for DG trucking and fuel and LSFO trucking authorized in Order No. 23377 in Docket No. 04-0113.

Revenues at present rates are revenues from base rates, but do not include the interim rate increase and interim surcharge revenues.

years is mutually exclusive. In effect, the revenue requirement approved for the latest test year supersedes the revenue requirement approved for a previous test year since the latest revenue requirement represents an update of the level of revenues required to recover the utility's most recent costs and have the opportunity to earn the rate of return on the test year rate base. For example, the revenue requirement approved on an interim basis for the 2005 test year in Docket No. 04-0113 was \$1,274,885,000. (Interim D&O 22050, Exhibit A, page 1.) Due to higher operating costs and plant investments added since 2005, the revenue requirement approved on an interim basis for the 2007 test year in Docket No. 2006-0386 increased to \$1,480,454,000. (Interim D&O 23749, Exhibit A, page 1.) In the case of the HECO 2005 and 2007 test year rate cases, the surcharge to recover HECO's 2005 test year interim award was still effective when the surcharge to recover the interim award for the 2007 test year went into effect. The Commission subsequently issued the Final D&O for the 2005 test year rate case, which reduced the 2005 test year revenue requirement to \$1,266,459,000. The revenues for the 2007 test year based on the final rates being implemented in Docket No. 04-0113 are \$1,402,671,000, compared to revenues of \$1,410,457,000 at the "current effective rates" that were in effect at the time the interim in Docket No. 2006-0386 was implemented. As a result, the interim increase for the 2007 test year rate case will have to be adjusted upwards so that the Company will be able to recover the \$1,480,454,000 revenue requirement for the 2007 test year. The table below illustrates this:

TABLE 2 2007 TEST YEAR REVENUE REQUIREMENTS (000's)

	Interim Decision and Order No.			
	23749 (at Current Effective Rates)		After Final D&O in 2005 Test Year Rate Case	
Base Rate Revenue	785,814	1	1,245,430	4
2005 Rate Case Interim Surcharge	51,885	2		
AES Sur-Credit	(3,191)	1		
ECAC	566,707	1	153,335	4
DG/LSFO Fuel and Trucking Interim Surcharge	5,358	1	2	_
Electric Sales Revenues	1,406,573	1	1,398,765	4
Other Operating Revenues	3,384	3	3,406	5
Gain on Sale of Land	500	3	500	5
Total Operating Revenues	1,410,457	3	1,402,671	 5
2007 Test Year Revenue Requirement	1,480,454	3	1,480,454	5
2007 Test Year Interim Increase Required	69,997	_	77,783	_

Exhibit 2, page 2

The second column of the above table shows that the 2005 test year rate case interim surcharge, the ECAC amount (based on the 2007 test year fuel prices and purchased energy costs), the AES sur-credit, and the DG/LSFO Fuel and Trucking Interim Surcharge are being incorporated into base rates as a result of the Final D&O in the 2005 test year rate case. The ECAC has also been reset according to the energy cost adjustment factor ("ECAF") to which the parties agreed in the Stipulated Settlement Letter for the 2005 test year rate case. However, the total electric sales revenues for the 2007 test year based on the final rates being implemented in Docket

<sup>&</sup>lt;sup>2</sup> Exhibit 2, page 2

Interim Decision and Order No. 23749, Docket No. 2006-0386, Exhibit A, page 1

<sup>&</sup>lt;sup>4</sup> Exhibit 1, page 14

<sup>&</sup>lt;sup>5</sup> Exhibit 3, page 1

No. 04-0113 are reduced from \$1,406,573,000 (based on "current effective rates") to \$1,398,765,000, primarily as a result of the disallowance of the pension asset (net of ADIT) from rate base in the 2005 test year Final D&O. As indicated in Table 2, the electric sales revenue of \$1,406,573,000 included \$51,885,000 of surcharge revenues from the 2005 test year rate case interim award at "current effective rates", which as explained earlier, was based on the inclusion of the pension asset in rate base. The \$1,398,765,000 of electric sales revenue was based on the 2007 test year sales forecast. (Exhibit 1 of this document, page 14.) These final rates resulted from the revenue requirement of \$1,266,459,000 authorized in the Final D&O for the HECO 2005 test year rate case. (See HECO 2005 Test Year Rate Case Final Tariff Sheets and Rate Schedules, Exhibit 3).

Excluding the effect of interest synchronization, the 2007 test year revenue requirement would remain at \$1,480,454,000, which already reflects the exclusion of the pension asset (net of ADIT) from rate base. <sup>13</sup> Page 1 of Exhibit B of Interim D&O 23749 of the 2007 test year rate case confirms that the Company's average test year rate base excludes the pension asset and that the resulting average depreciated test year rate base supports the revenue requirement of \$1,480,454,000 shown on page 1 of Exhibit A of Interim D&O 23749. Any further reduction of the 2007 test year revenue requirement for the exclusion of the pension asset from rate base would be a double counting of that disallowance. Because the Final D&O in the 2005 test year rate case reduces 2007 test year revenues (at final rates approved in Docket No. 04-0113) to \$1,402,671,000, the interim increase for the 2007 test year rate case would need to be increased to \$77,783,000 for the Company to have the opportunity to achieve the 2007 test year revenue requirement of \$1,480,454,000. Adding in the impact of interest synchronization (\$84,000), the

The 2007 test year revenue requirement as reflected in the revised results of operations filed on March 28, 2008 is slightly less than \$1,480,454,000 due to rounding.

2007 test year revenue requirement would increase to \$1,480,538,000 and the interim increase for the 2007 test year would be \$77,867,000 (Exhibit 1 of this document, page 1).

# B. THE 2007 TEST YEAR INTERIM INCREASE MUST BE INCREASED TO AVOID DOUBLE COUNTING THE DISALLOWANCE OF THE PENSION ASSET

Another way of understanding why the 2007 test year interim increase must be adjusted is to examine how the current 2007 test year interim increase was derived. As explained above, the 2005 test year interim increase of \$53,288,000 (Interim D&O 22050, Exhibit A, page 1) was based on an average test year rate base that included a prepaid pension asset of \$78,791,000. The interim increase of \$69,997,000 over current effective rates that the Commission approved for the 2007 test year rate case (Interim D&O 23749, Exhibit A, page 1) was based on the Company receiving \$51,885,200 of surcharge revenues from the 2005 test year interim increase, \$5,358,200 of revenues from the DG/LSFO Fuel and Trucking Interim Surcharge and \$53,000 of additional late payment charges. Without these revenues, the 2007 test year interim increase would have been \$127,293,000 over revenues at present rates. (HECO 2007 Test Year Rate Case – Statement of Probable Entitlement, Exhibit 2, page 1.)

These 2007 interim increase amounts (i.e., \$69,997,000 and \$127,293,000) reflected the exclusion of the pension asset from rate base. Page 1 of Exhibit B of Interim Decision and Order No. 23749 of the 2007 test year rate case confirms that the Company's average test year rate base excludes the pension asset and that the resulting average depreciated test year rate base supports the interim increase of \$69,997,000 over revenues at current effective rates shown on page 1 of Exhibit A of Interim D&O 23749. Page 3 of Exhibit 2 of the HECO 2007 Test Year Rate Case –

The 2005 test year interim surcharge revenue amount of \$51,885,000 for the 2007 test year is less than the interim award of \$53,288,000 for the 2005 test year primarily because the 2007 test year estimate of base revenues of \$785,813,700 was lower than the estimate of base revenues used to establish the 2005 test year interim surcharge percentage rates, which was \$806,252,700. See HECO 2005 Test Year Rate Case – Tariff for Interim Rate Increase, September 28, 2005, Exhibit 3, page 2.

Statement of Probable Entitlement also confirms the exclusion of the pension asset from the Company's rate base and that the resulting average depreciated test year rate base supports the interim increase of \$127,293,000 over revenues at present rates on page 1 of Exhibit 2 of the 2007 test year Statement of Probable Entitlement.

Thus, the surcharges for the 2005 and 2007 test year interim increases that were in effect prior to the issuance of the Final D&O in the 2005 test year rate case together with the base rates then in effect resulted in a level of revenues that already reflected the exclusion of the pension asset from rate base. The 2007 test year interim increase was designed based on the 2005 test year interim increase being in effect at the same time. Although the 2005 test year interim increase reflected the inclusion of the pension asset in rate base, the 2007 interim increase negated that inclusion and reflected the exclusion of the pension asset. The Final D&O for the 2005 test year rate case has lowered the revenue increase for the 2005 test year from \$53,288,000 to \$44,862,000 largely due to the exclusion of the pension asset from rate base. If the 2007 test year interim increase remains at \$69,997,000, the disallowance of the pension asset from rate base will be counted twice. Therefore, with the implementation of a final revenue increase of \$44,862,000 for the 2005 test year rate case, the 2007 test year interim award would need to be increased from \$69,997,000 to \$77,783,000 (Exhibit 3 of this document, page 1) so that the disallowance of pension asset from rate base will only be reflected once. As explained in the section below, adding the impact of interest synchronization would increase 2007 test year interim award to \$77,867,000 (Exhibit 1, page 1 of this document).

#### C. <u>INCORPORATING INTEREST SYNCHRONIZATION WOULD ADD \$84,000</u> TO THE 2007 TEST YEAR REVENUE REQUIREMENT

In the HECO 2007 test year rate case, the DOD proposed an adjustment for interest synchronization to determine the interest deduction for the calculation of test year income tax

expense. HECO did not agree with this proposal and did not use interest synchronization to develop its revenue requirements for the test year. The parties took the same positions in Docket No. 04-0113 (HECO 2005 test year rate case). For purposes of settlement in the HECO 2007 test year rate case, the parties agreed to not relitigate the issue in this docket, that HECO's method of computing interest expense for the purposes of determining income taxes for the 2007 test year will be used in calculating the interim rate increase (as it was in Interim Decision and Order No. 22050 in Docket No. 04-0113), and that the interest synchronization methodology issue will be determined by the final non-appealable decision in Docket No. 04-0113. As a result, the Parties agreed to waive evidentiary hearings and proposed findings of fact and conclusions of law with respect to this issue.

On March 4, 2008, the Commission issued Order No. 24068 which adopted the interest synchronization method as the mechanism for computing interest expense in the HECO 2005 test year rate case and directed the parties to file stipulated revised results of operation schedules consistent with this order and Amended Proposed Decision and Order No. 23768. On March 28, 2008, the parties filed their stipulated revised results of operations which incorporated the impact of interest synchronization on the 2005 test year revenue requirement.

On May 1, 2008, the Commission issued its Final D&O in HECO's 2005 test year rate case. The Final D&O stated: "Based on a full review of the entire record, as decided in Order No. 24068, the commission determines that the interest synchronization method for calculating interest expense should be adopted in this case..." (at 22). The Final D&O further stated that Exhibits A and B of the Final D&O (which provide the approved 2005 test year revenue requirements) incorporate the stipulated revised results of operations filed by the parties on March 28, 2008 (at 7).

As a result of the Commission's decisions on interest synchronization in Order No. 24068 and the Final D&O, the parties have agreed that HECO should use the interest synchronization method to compute interest expense for the purpose of calculating income tax expense for the 2007 test year interim increase adjustment. Given the likelihood that the Commission would consistently adopt interest synchronization in the HECO 2007 test year rate case, incorporating interest synchronization in the 2007 test year interim adjustment would eliminate the need to make the same adjustment after the issuance of the final decision and order for the 2007 test year rate case. As shown on page 1 of Exhibit 1 of this document, incorporating interest synchronization adds \$84,000 to the 2007 test year revenue requirement so that the adjusted interim increase should be \$77,867,000 and the 2007 test year revenue requirement should be \$1,480,538,000.

## D. THE ADJUSTED INTERIM INCREASE REFLECTS DSM EXPENSES AS THE PARTIES AGREED IN THE STIPULATED SETTLEMENT LETTER

The treatment of DSM expenses in the Stipulated Settlement in the 2007 test year rate case is slightly different than the treatment of DSM expenses in the Final D&O in the 2005 rate case, due to the timing of the Final D&O.<sup>15</sup>

At the time the Company filed its application and direct testimonies for the 2007 test year rate case on December 22, 2006, the Energy Efficiency Proceeding (Docket No. 05-0069) was in progress. The Company's direct testimony (HECO T-9) stated that for the purposes of the 2007 test year rate case, HECO was using the method of cost recovery that was currently in place, namely, that DSM program costs currently being recovered in base rates would continue to be recovered in base rates, and incremental DSM program costs currently being recovered through the DSM Surcharge would continue to be recovered through that surcharge. The method of

<sup>&</sup>lt;sup>15</sup> In addition, HECO is not in a position to unilaterally change the amount of the stipulated interim revenue requirement.

recovery was based on prior Commission orders in other DSM and rate case dockets. (Docket No. 04-0113, HECO T-9, page 4.)

The parties executed the Stipulated Settlement Letter for the 2007 test year rate case on September 5, 2007. The residential and commercial and industrial direct load control program and associated expenses (\$1,830,000)<sup>16</sup> remained in base rates as Decision and Order No. 23258 in the Energy Efficiency Proceeding ruled that the HECO Companies' load management programs would be excluded from the third-party administrator's area of responsibility (at 144). However, the parties agreed to remove the following DSM program labor expenses and associated corporate administration and employee benefit costs and payroll taxes (\$543,000) from base rates for the following positions:<sup>17</sup>

- · Commercial and Industrial ("C&I") DSM Program Manager
- Residential DSM Program Manager
- three Customer Efficiency Program Analysts
- C&I Engineer

In addition to the residential and commercial and industrial direct load control program costs, DSM program labor and associated corporate administration and employee benefit costs and payroll taxes (approximately \$131,000) for employees that spent a small portion of their time on DSM programs (less than 50%) remained in base rates. (HECO 2007 Test Year Rate Case – Stipulated Settlement Letter, HECO T-9, Attachment 8; Exhibit 4 of this document).

On May 1, 2008, the Commission issued the Final D&O for the 2005 test year rate case. With respect to DSM expenses, the Final D&O stated:

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<sup>&</sup>lt;sup>16</sup> See Docket No. 2006-0386, HECO-914, page 1; response to CA-IR-122, page 6.

These programs are Commercial and Industrial Energy Efficiency ("CIEE"), Commercial and Industrial New Construction ("CINC"), Commercial and Industrial Customized Rebate ("CICR"), Residential Efficient Water Heating ("REWH"), Residential New Construction ("RNC"), Energy Solutions for the Home ("ESH"), Residential Low Income ("RLI"), and Solar Saver Pilot Program.

"Thus, HECO shall recover the DSM incremental labor costs, the load management program costs, and the load control program advertising costs through the existing IRP surcharge mechanism..." (at 45).

As explained above, as a result of the agreements in the Stipulated Settlement Letter, a portion of load management program costs and some DSM program labor costs (which up to now have been recovered through base rates and the 2005 test year interim increase) remain in the 2007 test year revenue requirement. If the Commission wants HECO to recover these remaining DSM expenses through the DSM Surcharge instead of through base rates, the Company can accordingly remove recovery of these DSM expenses from base rates when it implements the final rates in the 2007 test year rate case and correspondingly recover these expenses in the DSM Surcharge.

# E. THE FINAL RATES FOR THE 2005 TEST YEAR RATE CASE AND THE SURCHARGE FOR THE ADJUSTED INTERIM INCREASE MUST GO INTO EFFECT ON THE SAME DAY

The final rates for the 2005 test year rate case and the adjusted interim increase surcharge for the 2007 test year rate case <u>must go into effect on the same date</u> to ensure that the Company has the opportunity to receive on a continuous basis the level of revenues needed to recover the revenue requirement of \$1,480,454,000 that the Commission authorized on an interim basis in Interim D&O 23749 plus the additional revenue requirement of \$84,000 to incorporate the impact of interest synchronization.. If the Commission orders the adjustment to the 2007 test year interim increase to be effective after the final rates for the 2005 test year rate case go into effect, there would be a shortfall in revenues which would be harmful to the Company's financial condition. Further, the base rates against which the current 2007 test year interim increase surcharge percentages apply will no longer exist when the final rates for the 2005 rate case go into effect. Therefore, the Company respectfully requests that the Commission order that the

final rates for the 2005 test year rate case and the adjusted interim increase for the 2007 test year rate case go into effect on the same date.

#### III. <u>CONCLUSION</u>

For the reasons stated above, HECO respectfully requests the Commission to approve an adjustment to the interim increase for the 2007 test year rate case from \$69,997,000 over revenues at "current effectives rates" to \$77,867,000 over revenues at the final rates implemented in Docket No. 04-0113, to be effective on the same date as the final rates resulting from the Final D&O in the 2005 test year rate case proceeding.

DATED: Honolulu, Hawaii, May 21, 2008.

THOMAS W. WILLIAMS, JR.

PETER Y. KIKUTA DAMON L. SCHMIDT

Attorneys for HAWAIIAN ELECTRIC COMPANY, INC.

# Hawaiian Electric Company, Inc. Adjusted Interim at Curr Eff Rates w/Interest Sync Results of Operations

2100,010	p		
(\$ Tho	ousands)		Revenue Requirements to Produce 8.62%
	Current		Return on
	Effective	Additional	Average
	Rates	Amount	
		Amount	Rate Base
Electric Sales Revenue	1,398,765	77,149	1,475,914
Other Operating Revenue	3,406	718	4,124
Gain on Sale of Land	500	44	500
TOTAL OPERATING REVENUES	1,402,671	77,867	1,480,538
Fuel	543,874		543,874
Purchased Power	387,492		387,492
Production	67,597		67,597
Transmission	10,272		10,272
Distribution	24,663		24,663
Customer Accounts	11,720		11,720
Allowance for Uncoll. Accounts	970	0	970
Customer Service	5,890		5,890
Administration & General	69,189		69,189
Gen Excise Tax Rate Incr Adj	328		328
Operation and Maintenance	1,121,995	0	1,121,995
Depreciation & Amortization	78,763		78,763
Amortization of State ITC	(1,304)		(1,304)
Taxes Other Than Income	130,706	6,900	137,606
Interest on Customer Deposits	377	15	377
Income Taxes	15,641	27,613	43,254
TOTAL OPERATING EXPENSES	1,346,178	34,513	1,380,691
OPERATING INCOME	56,493	43,354	99,847
AVERAGE RATE BASE	1,159,090	(775)	1,158,315
RATE OF RETURN ON AVERAGE			
RATE BASE	4.87%		8.62%

### Adjusted Interim at Curr Eff Rates w/Interest Sync COMPOSITE EMBEDDED COST OF CAPITAL Estimated Average

	A	В	C	D
	Capita	alization		
	Amount in Thousands	Percent of Total	Earnings Reqmts	Weighted Earnings Reqmts (B) x (C)
Short-Term Debt	38,971	3.08	5.00%	0.154%
Long-Term Debt	480,727	38.01	6.09%	2.314%
Hybrid Securities	27,556	2.18	7.47%	0.163%
Preferred Stock	20,586	1.63	5.51%	0.090%
Common Equity	696,826	55.10	10.70%	5.896%
Total	1,264,666	100.00		
Estimated Composite	Cost of Capit	al		8.617%
			or	8.62%

# Adjusted Interim at Curr Eff Rates w/Interest Sync AVERAGE RATE BASE (\$ Thousands)

	Beginning Balance	End of Year Balance	Average Balance
Investments in Assets Serving Customers			
Net Cost of Plant in Service	1,331,363	1,370,649	1,351,006
Property Held for Future Use	517	3,567	2,042
Fuel Inventory	53,084	53,084	53,084
Materials & Supplies Inventories	12,838	12,838	12,838
Unamort. Net SFAS 109 Reg. Asset	53,483	55,970	54,727
Pension Asset	0	0	0
OPEB Amount	0	0	0
Unamort Sys Dev Costs	0	4,642	2,321
Unamort DSG Reg Asset	0	0	0
ARO Reg Asset	27_	26	27
Total Investments in Assets	1,451,312	1,500,776	1,476,045
Funds From Non-Investors			
Unamortized CIAC	164,092	176,802	170,447
Customer Advances	1,001	756	879
Customer Deposits	6,369	6,827	6,598
Accumulated Def. Income Taxes	135,254	130,294	132,774
Unamort State ITC (Gross)	28,523	30,044	29,284
Unamortized Gain on Sale	1,582	1,214	1,398
Total Deductions	336,821	345,937	341,380
Difference		a.	1,134,665
Working Cash at Current Effective	Rates	_	24,425
Rate Base at Current Effective Ra	ates		1,159,090
Change in Rate Base - Working Cas	sh	-	(775)
Rate Base at Proposed Rates			1,158,315

## Adjusted Interim at Curr Eff Rates w/Interest Sync WORKING CASH ITEMS

	A	В	C NET	D
	COLLECTION	PAYMENT	COLLECTION	28
	LAG	LAG	LAG	ANNUAL
	(DAYS)	(DAYS)	(DAYS)	AMOUNT
			(A - B)	
ITEMS REQUIRING WORKING CASH				
Fuel Oil Purchases	37	17	20	537,767
O&M Labor	37	11	26	88,209
O&M Nonlabor	37	34	3	100,922
Pension Asset Amortization	37	0	37	=
ITEMS THAT PROVIDE WORKING CASH	Ŧ			
Revenue Taxes	37	66	(29)	124,412
Income Taxes-Present Rates	37	40	(3)	17,776
Income Taxes-Proposed Rates	37	40	(3)	45,389
Purchased Power	37	39	(2)	387,492
	E	F	G	H
	_	WORKING	<b>2</b> /	WORKING
	AVERAGE	CASH	AVERAGE	CASH
	DAILY	(PRESENT	DAILY	(PROPOSED
	AMOUNT	RATES)	AMOUNT	RATES)
	(D/365)	(C X E)	(PROPOSED)	(C X G)
ITEMS REQUIRING WORKING CASH			**************************************	-
Fuel Oil Purchases	1,473	29,467	1,473	29,467
O&M Labor	242	6,283	242	6,283
O&M Nonlabor	276	829	276	829
Pension Asset Amortization	0	0	0	0
ITEMS THAT PROVIDE WORKING CAS	H			
Purchased Power	1,062	(2,123)	1,062	(2,123)
Revenue Taxes	341	(9,885)	360	(10,433)
Income Taxes-Present Rates	49	(146)		
Income Taxes-Proposed Rates	124	<del>-</del>	124	(373)
Total		24,425		23,650
	9-	men direct de final met	•	
Change in Working Cash				(775)

## Adjusted Interim at Curr Eff Rates w/Interest Sync COMPUTATION OF INCOME TAX EXPENSE

-	Current Effective Rates	Adjustment	At Proposed Rates
Operating Revenues	1,402,671	77,867	1,480,538
Operating Expenses: Fuel Oil and Purchased Power Other Operation & Maintenance	931,366		931,366
Expense	190,629	O	190,629
Depreciation	78,763		78,763
Amortization of State ITC	(1,304)		(1,304)
Taxes Other than Income	130,706	6,900	137,606
Interest on Customer Deposits	377		377
Total Operating Expenses	1,330,537	6,900	1,337,437
Operating Income Before Income Taxes	72,134	70,967	143,101
Tax Adjustments: Interest Expense Meals and Entertainment	(30,475) 81		(30,475) 81
	(30,394)	0	(30,394)
Taxable Income at Ordinary Rates	41,740	70,967	112,707
Income Tax Exp at Ordinary Rates	16,241	27,613	43,854
Tax Benefit of Domestic Production Activities Deduction Tax Effect of Deductible Preferred Stock Dividends	577		577 23
÷		~~~	
TOTAL INCOME TAX EXPENSE	15,641	27,613	43,254

## Adjusted Interim at Curr Eff Rates w/Interest Sync COMPUTATION OF TAXES OTHER THAN INCOME TAX

a a	Rate	At Curr Eff Rates	Adjustment	At Proposed Rates
Electric Sales Revenue Other Operating Revenue		1,398,765 3,406	77,149 718	1,475,914 4,124
Operating Revenues		1,402,171	77,867	1,480,038
PUC Fees	5.885% ).500% 2.500%	82,461 7,006 34,945 6,294	4,582 389 1,929	87,043 7,395 36,874 6,294
TOTAL TAXES OTHER THAN INCOM	Æ TAX	130,706	6,900	137,606

## Adjusted Interim at Curr Eff Rates w/Interest Sync CALCULATIONS OF REVENUE REQUIREMENTS

OPERATING INCOME AT CURRENT EFFECTIVE RATES:	
Operating Revenues	1,402,671
Fuel and Purchased Power Expenses	931,366
Other O&M Expenses	190,629
Depreciation & Amortization Expense	78,763
Amortization of State ITC	(1,304)
Taxes Other than Income	130,706
Interest on Customer Deposits	377
Income Taxes	15,641
Total Operating Expenses	1,346,178
OPERATING INCOME AT CURRENT EFFECTIVE RATES	56,493
OFBRAITING INCOME AT CURRENT EFFECTIVE RATES	
CALCULATIONS OF REVENUE REQUIREMENTS:	
OPERATING INCOME	
Rate Base at Proposed Rates	1,158,315
Proposed Rate of Return on Rate Base x	8.62%
Operating Income	99,847
Less: Operating Income at Current Effective Rate	56,493
INCREASE IN OPERATING INCOME	43,354
ODEDAMING DEVENUE	
OPERATING REVENUES: Increase in Operating Income	43,354
Operating Income Divisor (divided by)	0.55677
INCREASE IN OPERATING REVENUES	77,867
INCREASE IN OPERALING REVENUES	77,887
Increase in Electric Sales Revenue	77,149
Other Operating Revenue Rate x	0.931%
Increase in Other Operating Revenues	718
	77,867

# Adjusted Interim at Curr Eff Rates w/Interest Sync CALCULATIONS OF REVENUE REQUIREMENTS

BAD DEBT:		399
Increase in Electric Revenues		77,149
Bad Debt Rate	x	0.0000
INCREASE IN BAD DEBT EXPENSE	<del>1. 10 1</del>	0
REVENUE TAX:		
Increase in Operating Revenues		77,867
Less: Increase in Bad Debt Expense	-	0
9		77,867
PSC Tax & PUC Fees Rate	x	6.385%
	<del>2</del>	4,971
Increase in Electric Revenues		77,149
Less: Increase in Bad Debt Expense		. 0
		77,149
Franchise Tax Rate	x	2.500%
N	<u></u>	1,929
INCREASE IN REVENUE TAX	**	6,900
INCOME TAX:		
Increase in Operating Revenues Effective Income Tax Rate after considering		77,867
revenue tax & bad debt	x	35.462%
INCREASE IN INCOME TAX	8 <del>1 520</del>	27,613
INCREASE IN OPERATING INCOME (check)	22500 0	43,354
	•	

# Adjusted Interim at Curr Eff Rates w/Interest Sync CALCULATIONS OF REVENUE REQUIREMENTS

#### (\$ Thousands)

#### CHANGE IN RATE BASE:

	A	B AVERAGE DAILY	C NET	D WORKING CASH
~	EXPENSE AMOUNT	AMOUNT (A/365)	COLLECTION LAG (DAYS)	REQMT (B) x (C)
Increase in Revenue Tax	6,900	19	(29)	(548)
Income Tax at present rates	17,776	49	(3)	146
Income Tax at proposed rate	45,389	124	(3) _	(373)
CHANGE IN RATE BASE - WORKIN	G CASH			(775)
Rate Base at Present Rates			_	1,159,090
PROPOSED RATE BASE			-	1,158,315
Operating Income at Present	Rates			56,493
Increase in Operating Income	•		_	43,354
OPERATING INCOME AT PROPOSED	RATES		=	99,847
PROPOSED RATE OF RETURN ON R	ATE BASE (ch	neck)		8.62%

### Adjusted Interim at Curr Eff Rates w/Interest Sync SUPPORT WORKSHEET

OPERATING REVENUES:	
Electric Sales Revenues	1,398,765
Other Operating Revenues	3,406
Gain on Sale of Land	500
TOTAL OPERATING REVENUES	1,402,671
FUEL OIL AND PURCHASE POWER EXPENSES:	
Fuel Oil Expense	537,767
Fuel Related Non-labor Exp	5,207
Fuel Handling Labor Expense	900
Fuel Oil Expense	543,874
Purchased Power Expense	387,492
TOTAL FUEL OIL AND PURCHASE POWER EXPENSES	931,366
OTHER OPERATION & MAINTENANCE EXPENSES:	
Production	67,597
Transmission	10,272
Distribution	24,663
Customer Account	11,720
Allowance for Uncollectible Accounts	970
Customer Service	5,890
Administration & General	69,189
Gen Excise Tax Rate Incr Adj	328
TOTAL OTHER OPERATION & MAINTENANCE EXPENSES	190,629

### Adjusted Interim at Curr Eff Rates w/Interest Sync SUPPORT WORKSHEET

TOTAL FUEL OIL & PP AND OTH O&M EXPENSES (LABOR/NONLABOR)	
Fuel Oil Expense	537,767
Purchase Power Expense	387,492
Total Labor Expense	
Labor Expense	88,209
Total Labor Expense	88,209
Total Nonlabor Expense	
Nonlabor Expense	103,320
Fuel Related Expense	5,207
Payroll Taxes	6,294
Bad Debt Expense	(970)
Pension Expense	(12,929)
Pension Asset Amortization	0
	100,922
TOTAL FUEL OIL & PP, OTH O&M AND PR TAX EXPENSES	1,114,390
REVENUE TAX Public Service Tax	
Electric Sales Revenues	1,398,765
Other Operating Revenues	3,406
Less: Bad Debt Expense	(970)
Operating Revenues subject to PSC Tax	1,401,201
Public Service Tax Rate x	5.885%
Total PSC Tax	82,461
PUC Fees	
Electric Sales Revenues	1,398,765
Other Operating Revenues	3,406
Less: Bad Debt Expense	(970)
Operating Revenues subject to PSC Tax	1,401,201
PUC Tax Rate x	0.500%
Total PUC Tax	7,006

### Hawaiian Electric Company, Inc.

## Adjusted Interim at Curr Eff Rates w/Interest Sync SUPPORT WORKSHEET

Franchise Tax	
Electric Sales Revenues	1,398,765
Less: Bad Debt Expense	(970)
	1,397,795
Franchise Tax Rate x	2.500%
Total Franchise Tax	34,945
TOTAL REVENUE TAX	124,412
INTEREST EXPENSE:	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Weighted Cost of Debt	
Short-Term Debt	0.154%
Long-Term Debt	2.314%
Hybrid Securities	0.163%
Total	2.631%
Rate Base at Proposed Rates x	1,158,315
TOTAL INTEREST EXPENSE	30,475
INCOME TAX EXPENSE SUMMARY	
Current	17,776
Deferred	(4,960)
State ITC	2,825
Pension Asset Amortization	0
TOTAL INCOME TAX EXPENSE	15,641
CALCULATIONS OF REVENUE TAX RATE:	
Franchise Tax Rate adjusted for Change in Oth Oper	
Revenues and Bad Debt	0.02477
PSC Tax Rate adjusted for Bad Debt	0.05885
PUC Tax Rate adjusted for Bad Debt	0.00500
REVENUE TAX RATE	0.08862
CALCULATIONS OF COMPOSITE INCOME TAX RATE:	
State Tax Rate	0.06015
Federal Tax Rate	0.35000
rederat fan Race	0.55000
State Tax Rate	0.06015
Federal Tax Rate x	0.35000
Federal Tax Effect on State Tax	(0.02105)
COMPOSITE INCOME TAX RATE	0.38910

PBase-Adj Interim curr eff rates wInt Sync.xls Support 5/13/2008 4:51 PM

### Hawaiian Electric Company, Inc.

### Adjusted Interim at Curr Eff Rates w/Interest Sync SUPPORT WORKSHEET

CALCULATIONS OF COMPOSITE CAPITAL GAINS TAX RATE: State Capital Gains Tax Rate	0.03759
Federal Tax Rate	0.35000
State Capital Gains Tax Rate	0.03759
Federal Tax Rate x	0.35000
Federal Tax Effect on State Capital Gains Tax Rate	(0.01316)
COMPOSITE CAPITAL GAINS TAX RATE	0.37444
CALCULATIONS OF EFFECTIVE INCOME TAX RATE:	
PSC Tax & PUC Fees Rates adjusted for Bad Debt	0.06385
Franchise Tax adjusted for Change in Oth Oper Rev and Bad Debt	0.02477
Bad Debt Rate adjusted for Change in Oth Oper Rev	0.02477
Revenue Tax and Bad Debt rate	0.08862
The Verries Tark and Date Debt Late	0.00002
Rev Tax & Bad Debt Reciprocal (1 - 0.08862)	0.91138
Composite Income Tax Rate x	0.38910
EFFECTIVE INCOME TAX RATE AFTER CONSIDERING	
REVENUE TAX & BAD DEBT	0.35462
CALCULATIONS OF OPERATING INCOME DIVISOR:	
PSC Tax & PUC Fees Rates	0.06385
Franchise Tax adjusted for Change in Oth Oper Rev	0.02477
Bad Debt Rate adjusted for Change in Oth Oper Rev Effective Income Tax Rate after considering	% <del>-</del>
revenue tax & bad debt	0.35462
revenue can a sua dest	0.44323
	0.44323
OPERATING INCOME DIVISOR (1 - 0.44323)	0.55677

### Hawaiian Electric Company, Inc. Docket No. 2006-0386 Test Year 2007

### Estimation of Test Year Revenue - Based on TY2005 Final Rates Present Rates (\$000S)

		_	Present Hates (\$0005)				
Line	Rate Schedule	Forecast MWh	Base	AES	FOA	Total	Reference
		[1]	[2]	[3]	[4]	[5]	
	1 R	2,128,900	\$389,948.5	\$0.0	\$42,280.0	\$432,228.5	R Exhibit 1A, p.1
	2 G	371,800	\$73,421.5	\$0.0	\$7,383.9	\$80,805.4	G Exhibit 1A, p.12
	3 J	2,068,800	\$330,947.4	\$0.0	\$41,086.4	\$372,033.8	J Exhibit 1A, p.20
	4 H	40,500	\$6,549.5	\$0.0	\$804.3	\$7,353.8	H Exhibit 1A, p.108
ļ	5 PS	835,857	\$124,380.0	\$0.0	\$16,600.1	\$140,980.1	PS Exhibit 1A, p.113
	6 PP	2,061,983	\$291,309.4	\$0.0	\$40,951.0	\$332,260.4	PP Exhibit 1A, p.127
	7 PT	175,161	\$22,524.0	\$0.0	\$3,478.7	\$26,002.7	PT Exhibit 1A, p.146
	8 F	37,800	\$6,350.0	\$0.0	\$750.7	\$7,100.7	F Exhibit 1A, p.154
9	9 Total	7,720,801	\$1,245,430.3	\$0.0	\$153,335.1	\$1,398,765.4	

PRESENT RATES

\$389,948.5

\$42,280.0

\$432,228.5

\$0.0

1.986

0.000%

## HAWAIIAN ELECTRIC COMPANY, INC. Docket No. 2006-0386, Test-Year 2007 DIRECT TESTIMONY SCHEDULE R - RESIDENTIAL SERVICE

### **ESTIMATE OF TEST YEAR REVENUES**

	BILLING <u>UNITS</u>	UNIT PRICE	REVENUES \$1000S
ENERGY CHARGE:	(MWH)	<u>¢/kWh</u>	
NON-FUEL ENERGY CHARGE BASE FUEL ENERGY CHARGE	2,128,900 2,128,900	8.2993 8.8903	\$176,683.8 \$189,265.6
SUBTOTAL			\$365,949.4
CUSTOMER CHARGE:	BILLS	_\$/MONTH	
1 PHASE CHARGE 3 PHASE CHARGE	3,134,056 1,568	8.00 17.00	\$25,072.4 \$ <u>26.7</u>
SUBTOTAL	3,135,624		\$25,099.1
ADJUSTMENTS:			
SCHEDULE E ADJ. MINIMUM BILL ADJ 1 PHASE MINIMUM BILL ADJ 3 PHASE RESIDENTIAL TOU APARTMENT HOUSE:			(\$1,122.0) \$82.3 \$0.2 \$0.0 (\$60.5)
SUBTOTAL			(\$1,100.0)

¢/KWH

(%)

**TOTAL BASE REVENUE** 

**BILL ADJUSTMENTS:** 

**TOTAL REVENUES** 

FUEL OIL ADJUSTMENT:

RATE ADJUSTMENT (AES REFUND):

### DETERMINATION OF TEST-YEAR BILLING LOADS BY CUSTOMER GROUP

	NO. OF BILLS		MWH SA	ALES
RECORDED:	NUMBER OF BILLS	PERCENT OF TOTAL	MWH SALES	PERCENT OF TOTAL
RESIDENTIAL-R 1 Phase RESIDENTIAL-R 3 Phase EMPLOYEES-E 1 Phase EMPLOYEES-E 3 Phase	3,075,050 1,524 24,961 <u>0</u>	99.15 0.05 0.80 <u>0.00</u>	2,103,662 3,909 21,219 <u>0</u>	98.82 0.18 1.00 <u>0.00</u>
TOTAL R AND E	3,101,535	100.00	2,128,789	100.00
APT. HOUSE DISCOUNT	13,519	0.44	5,430	0.26
FORECASTS:	NO. OF E	BILLS	MWH S	<u>ALES</u>
	PERCENT OF TOTAL	NUMBER OF BILLS	PERCENT OF TOTAL	MWH SALES
RESIDENTIAL-R 1 Phase RESIDENTIAL-R 3 Phase EMPLOYEES-E 1 Phase EMPLOYEES-E 3 Phase	99.15 0.05 0.80 <u>0.00</u>	3,108,971 1,568 25,085 <u>0</u>	98.82 0.18 1.00 <u>0.00</u>	2,103,779 3,832 21,289 <u>0</u>
TOTAL R AND E	100.00	3,135,624	100.00	2,128,900
APT. HOUSE DISCOUNT	0.44	13,797	0.26	5,535

### DISTRIBUTION OF SALES AND BILLS

RECORDED:	NUMBER	PERCENT		PERCENT
	OF BILLS	OF TOTAL	MWH SALES	OF TOTAL
Usage Per Month:				
0 - 350 kWh	822,706	26.5258	181,342.7	8.5186
351 - 1200 kWh	1,893,629	61.0546	1,284,705.0	60.3491
Over 1200 kWh	385,200	12.4196	662,741.3	31.1323
TOTAL R AND E	3,101,535	100.0000	2,128,789.0	100.0000
FORECAST:	PERCENT OF TOTAL	NUMBER OF BILLS	PERCENT OF TOTAL	MWH SALES
Usage Per Month:	•			
0 - 350 kWh	26.5258	831,749	8.5186	181,352
351 - 1200 kWh	61.0546	1,914,443	60.3491	1,284,772
Over 1200 kWh	12.4196	389,432	31.1323	662,776
TOTAL R AND E	100.0000	3,135,624	100.0000	2,128,900

### DETERMINATION OF TEST-YEAR REVENUE ADJUSTMENTS FOR MINIMUM CHARGE PROVISION

1 PHASE	PRESENT <u>RATES</u>		
MINIMUM CHRG.,\$/MO. BASE RATE,\$/kWh F.O.A.,\$/kWh CUSTOMER CHRG, \$/M0 MINIMUM kWh/MONTH	16.00 0.171896 0.019860 8.00 41.72		
3 PHASE			
MINIMUM CHRG.,\$/MO. BASE RATE,\$/kWh F.O.A.,\$/kWh CUSTOMER CHRG, \$/M0 MINIMUM kWh/MONTH	22.00 0.171896 0.019860 17.00 26.07		
1 PHASE	PRESENT RATES		
	RECORDED	FORECAST	
SALES, MWH			
TOTAL R,E 1 Phase <= MIN.KWH/Mo. 41 % OF TOTAL	2,124,880 408 0.019	2,125,068 404	
NUMBER OF BILLS			
TOTAL R,E 1 Phase <= MIN.KWH/Mo. 41 % OF TOTAL	3,100,011 19,762 0.637	3,134,056 19,964	
3 PHASE	PRESENT	<u> RATES</u>	

TOTAL R,E 1 Phase <= MIN.KWH/Mo. 41 % OF TOTAL	3,100,011 19,762 0.637	3,134,056 19,964
3 PHASE	PRESENT	RATES
	RECORDED	FORECAST
SALES, MWH		
TOTAL R,E 3 Phase <= MIN.KWH/Mo. 26 % OF TOTAL	3,909 0 0.008	3,832 0
NUMBER OF BILLS		
TOTAL R,E 3 Phase <= MIN.KWH/Mo. 26 % OF TOTAL	1,524 30 1.969	1,568 31

### ESTIMATES OF TEST-YEAR REVENUE ADJUSTMENTS FOR MINIMUM CHARGE PROVISION

### AT PRESENT RATES

1 PHASE	UNITS BILLED	UNIT PRICE	REVENUES \$1000s
IF NO PROVISION FOR MINIMUM CHRG.:	<u>MWH</u>	<u>¢/KWh</u>	20
BASE ENERGY CHARGE FUEL OIL ADJUSTMENT:	404 404	17.1896 1.986	\$69.4 \$8.0
	BILLS	\$/MONTH	
CUSTOMER CHARGE	19,964	8.00	<u>\$159.7</u>
TOTAL, No Min Chrg Provision			\$237.1
	BILLS	\$/MONTH	
AS BILLED WITH MINIMUM CHARGE:	19,964	16.00	<u>\$319.4</u>
1 PHASE - MINIMUM BILL ADJ.			\$82.3

## ESTIMATES OF TEST-YEAR REVENUE ADJUSTMENTS FOR MINIMUM CHARGE PROVISION

### AT PRESENT RATES

3 PHASE	UNITS BILLED	UNIT PRICE	REVENUES \$1000s
IF NO PROVISION FOR MINIMUM CHRG.:	<u>MWH</u>	<u>¢/KWh</u>	<del></del>
BASE ENERGY CHARGE FUEL OIL ADJUSTMENT:	•	17.1896 1.986	\$0.0 \$0.0
	BILLS	\$/MONTH	
CUSTOMER CHARGE	31	17.00	<u>\$0.5</u>
TOTAL, No Min Chrg Provision			\$0.5
	BILLS	\$/MONTH	
AS BILLED WITH MINIMUM CHARGE:	31	22.00	<u>\$0.7</u>
3 PHASE - MINIMUM BILL ADJ.			\$0.2

## DISTRIBUTION OF SALES AND BILLS FOR EMPLOYEE DISCOUNT ADJUSTMENT

RECORDED:	NUMBER OF BILLS	PERCENT OF TOTAL	MWH SALES	PERCENT OF TOTAL
Usage Per Month: 0 - 350 kWh 351 - 825 kWh 826 - 1200 kWh Over 1200 kWh TOTAL E	2,456 11,664 6,206 4,635 24,961	9.8393 46.7289 24.8628 18.5690 100.0000	619.2 6,876.1 6,167.8 7,555.8 21,218.9	2,9182 32,4055 29,0675 35,6088 100,0000
FORECAST:	PERCENT OF TOTAL	NUMBER OF BILLS	PERCENT OF TOTAL	MWH SALES
<u>Usage Per Month:</u> 0 - 350 kWh 351 - 825 kWh 826 - 1200 kWh Over 1200 kWh TOTAL E	9.8393 46.7289 24.8628 18.5690	2,468 11,722 6,237 4,658 25,085	2.9182 32.4055 29.0675 35.6088 100.0000	621 6,899 6,188 7,581 21,289.0

#### HAWAIIAN ELECTRIC COMPANY, INC. SCHEDULE R - RESIDENTIAL SERVICE Docket No. 2006-0386, Test-Year 2007 DIRECT TESTIMONY

### ESTIMATE OF TEST-YEAR REVENUE ADJUSTMENT FOR EMPLOYEE DISCOUNT ADJUSTMENT

		PRESEN	T RATES
EMPLOYEE DISCOUNT UP TO 825 KWH	UNITS BILLED (MWH)	UNIT PRICE ¢/KWH	REVENUES \$1000s
ENERGY CHARGE 0 - 350 kWh	621		
350 - 825 KWH First 350 kWh Remaining kWh 350 - 825 KWH Total	4,102.7 2,796.3 6,899.0		<del>,</del>
Total	7,520.0	17.1896	1,292.7
FOA	7,520.0	1.9860	149.3
SUBTOTAL CUSTOMER CHARGE TOTAL	BILLS 14,190	\$8.00	1,442.0 113.5 1,555.5
-1/3% EMP. ADJ.			(518.4)
EMPLOYEE DISCOUNT	UNITS	PRESEN UNIT	T RATES
LIMITED to 825 KWH ENERGY CHARGE	BILLED (MWH)	PRICE ¢/KWH	REVENUES \$1000s
825 - 1200 KWH First 350 kWh kWh above 350 825 - 1200 KWH Total	2,183.0 2,963.0 5,146.0		
Over 1200 kWh First 350 kWh kWh above 350 Over 1200 kWh Total	1630.3 2212.7 3,843.0		
Total	8,989	17.1896	1,545.2
FOA	8,989	1.9860	178.5
SUBTOTAL	DILLO		1,723.7
CUSTOMER CHARGE TOTAL	BILLS 10,895	\$8.00	87.2 1,810.9
-1/3% EMP. ADJ.	30		(603.6)
TOTAL EMPLOYEE ADJ:			(1,122.0)

## DETERMINATION OF TEST-YEAR BILLING LOADS FOR APARTMENT HOUSE COLLECTION PROVISION

	PRESENT RATES
MAX Bill 100% Disc.,\$/MO.	50.00
BASE ENERGY ,\$/KWH	0.171896
F.O.A., \$/KWH	0.01986
RATE ADJUSTMENT, %	0.00000
INTERIM RATE ADJUSTMENT, %	0.00000
CUST. CHG., \$/BILL	8.00
KWH BLOCK @ MAX.DISC.	219.03

	RECORDED (MWH)	FORECAST (MWH)
SALES:		
0-219 KWH >219 KWH	606 <u>4,824</u>	618 4,917
TOTAL	5,430	5,535
NUMBER OF BILLS:	RECORDED BILLS	FORECAST BILLS
0-219 KWH >219 KWH	4,743 8,776	4,841 8,956
TOTAL	13,519	13,797

## ESTIMATE OF TEST-YEAR REVENUE ADJUSTMENTS FOR APARTMENT HOUSE COLLECTION PROVISION

	UNITS BILLED	UNIT PRICE	REVENUES \$1000S
Apt. Bills subject to 100% of Apt. House Discount	<u>MWH</u>	<u>¢/kWh</u>	
ENERGY CHARGE	618	17.1896	\$106.2
	<u>Bills</u>	\$/month	
CUSTOMER CHARGE	4,841	8.00	<u>\$38.7</u>
TOTAL BASE CHARGES			<u>\$144.9</u>
FUEL OIL ADJUSTMENT: RATE ADJUSTMENT (AES REFUND)	1.986 0.000	¢/KWH (%)	\$12.3 <u>\$0.0</u>
TOTAL ADJUSTMENTS			<u>\$12.3</u>
TOTAL OF BILLS subject to 10% discount			\$157.2
10% APT DISC.			(\$15.7)
Aut Hauss Diffe subject	<u>Bills</u>	\$/month	
Apt. House Bills subject to Maximum Discount	8,956	5.00	<u>(\$44.8)</u>
APT. HOUSE REVENUE ADJ.			(\$60.5)

#### **ESTIMATE OF TEST YEAR REVENUES**

DD	ESE	IT	RATE	0
	LOLI	N I	DAIL	<b>.</b>

	BILLING <u>UNITS</u>	UNIT PRICE	REVENUES \$1000S
ENERGY CHARGE:	(MWH)	<u>¢/kWh</u>	
NON-FUEL ENERGY CHARGE	2,128,900	8.2993	\$176,683.8
BASE FUEL ENERGY CHARGE	2,128,900	8.8903	\$ <u>189,265.6</u>
SUBTOTAL			\$365,949.4
CUSTOMER CHARGE:	BILLS	_\$/MONTH	
1 PHASE CHARGE 3 PHASE CHARGE	3,134,056 1,568	8.00 17.00	\$25,072.4 \$ <u>26.7</u>
SUBTOTAL	3,135,624		\$25,099.1
ADJUSTMENTS:			
FUEL OIL ADJUSTMENT: RATE ADJUSTMENT (AES REFUND): MISCELLANEOUS **:	¢/KWH (%)	1.986 0.000%	\$42,280.0 \$0.0 (\$1,100.0)
SUBTOTAL		,	\$41,180.0
TOTAL REVENUES			\$432,228.5

<sup>\*\*</sup> INCLUDES Schedule E Adj., Minimum Bill Adj., Apartment House Discount, and Residential TOU Adjustment.

### ESTIMATE OF TEST YEAR REVENUES

	BILLING UNITS	UNIT PRICE		REVENUES \$1000S
CUSTOMER CHARGE:	BILLS	\$/month		
1 PHASE - Regular 3 PHASE - Regular	192,429 119,955	30.00 55.00		\$5,772.9 \$ <u>6,597.5</u>
SUBTOTAL	312,384			\$12,370.4
ENERGY CHARGE:	_(MWH)_	¢/kWh		
G: Regular NON-DEMAND	371,800	16.4205		\$ <u>61,051.4</u>
Total	371,800			\$61,051.4
BASE REVENUE ADJUSTMEN	NTS:			
DP VOLTAGE ADJUSTMEN' DS VOLTAGE ADJUSTMEN' MINIMUM BILL ADJUSTMEN SCHEDULE E ADJUSTMEN TOU-C ADJUSTMENT	T IT			(\$0.3) \$0.0 \$0.0 \$0.0
SUBTOTAL			2	(\$0.3)
TOTAL BASE REVENUE			Š	\$73,421.5
Other Adjustments:		Rate		
FUEL OIL ADJUSTMENT: RATE ADJUSTMENT (AES RE	EFUND):	1.986 0.000	¢/KWH (%)	\$7,383.9 \$0.0
TOTAL REVENUES				\$80,805.4

### DETERMINATION OF TEST-YEAR BILLING LOADS

TOTAL G:	RECORDED	FORECASTED
SALES, MWH	367,340.7	371,800
NO. OF BILLS	295,128	312,384

### DISTRIBUTION OF SALES AND BILLS BY PHASE

	MWH S	<u>ALES</u>	NO. OF	BILLS
RECORDED:	SALES	PERCENT	NUMBER	PERCENT
	(MWH)	OF TOTAL	OF BILLS	OF TOTAL
1 PHASE	161,553.7	44.0	181,778	61.6
3 PHASE	205,787.0	56.0	113,350	38.4
TOTAL	367,340.7	100.0	295,128	100.0
FORECAST:	PERCENT	SALES	PERCENT	NUMBER
	OF TOTAL	(MWH)	OF TOTAL	OF BILLS
1 PHASE	44.0	163,592	61.6	192,429
3 PHASE	<u>56.0</u>	208,208	<u>38.4</u>	<u>119,955</u>
TOTAL	100.0	371,800	100.0	312,384

## DETERMINATION OF TEST-YEAR BILLING LOADS FOR DISTRIBUTION PRIMARY (DP) SERVICE

AT	PRES	ENT	RAT	ES
-				

		2017 112021	*** **********************************
		RECORDED	FORECAST
SALES, MWH			
TOTAL G: PRIMARY SVC. % OF TOTAL		367,341 78.939 0.021%	371,800 78
	BILLING	PRESENT	RATES
	UNITS <u>MWH</u>	UNIT PRICE CENTS/KWH	REVENUES \$1000S
ENERGY CHARGE:	78	16.4205	\$12.8
		<u>% ADJ.</u>	
DP ADJUSTMENT:		-2.1	(\$0.3)

## DETERMINATION OF TEST-YEAR BILLING LOADS FOR DISTRIBUTION SECONDARY (DS) SERVICE

### AT PRESENT RATES

	THE THEOLITI		11 III (I LO
		RECORDED	FORECAST
SALES, MWH			
TOTAL G: PRIMARY SVC. % OF TOTAL		367,341 13.729 0.004%	371,800 15
	DILLING	PRESENT	RATES
	BILLING UNITS <u>MWH</u>	UNIT PRICE CENTS/KWH	REVENUES \$1000S
ENERGY CHARGE:	15	16.4205	\$2.5
		<u>% ADJ.</u>	
DS ADJUSTMENT:		-0.6	\$0.0

## DETERMINATION OF TEST-YEAR BILLING LOADS FOR MINIMUM CHARGE PROVISION

1 PHASE	PRESENT <u>RATES</u>
MINIMUM CHRG., \$/MO.	30.00
BASE RATE, \$/KWH	0.164205
F.O.A., \$/KWH	0.019860
CUSTOMER CHRG., \$/MO.	30.00
MINIMUM KWH/MONTH	0.00
3 PHASE	PRESENT <u>RATES</u>
MINIMUM CHRG., \$/MO.	55.00
BASE RATE, \$/KWH	0.164205
F.O.A., \$/KWH	0.019860
CUSTOMER CHRG., \$/MO.	55.00
MINIMUM KWH/MONTH	0.00

## DETERMINATION OF TEST-YEAR BILLING LOADS FOR MINIMUM CHARGE PROVISION

	RECORDED	<u>FORECAST</u>
SALES, MWH		
TOTAL G LT/EQ TO MIN. KWH	367,340.7	371,800
1 PHASE	0.0	
3 PHASE	0.0	
TOTAL		¥
% OF TOTAL	0.000	0.000
NUMBER OF BILLS		
TOTAL G LT/EQ TO MIN. KWH	295,128	312,384
1 PHASE	-	<b>™</b> 8
3 PHASE		*
TOTAL	=	**
% OF TOTAL	0.00	0.00

### ESTIMATE OF TEST-YEAR REVENUE ADJUSTMENTS FOR MINIMUM CHARGE PROVISION

	UNITS BILLED	UNIT PRICE	REVENUES \$1000S
IF NO PROVISION FOR MINIMUM CHRG.:	<u>MWH</u>	\$/kWh	
ENERGY CHARGE: FUEL OIL ADJUSTMENT	₩ .æ.	16.4205 1.986	\$0.0 <u>\$0.0</u>
SUBTOTAL			\$0.0
	BILLS	\$/MONTH	
CUSTOMER CHARGE 1 PHASE 3 PHASE	(E)	30.00 55.00	\$0.0 <u>\$0.0</u>
SUBTOTAL	<u>*</u>		<u>\$0.0</u>
Total Billed w/o Min Charge			<u>\$0.0</u>
	BILLS	\$/MONTH	
AS BILLED WITH MINIMUM CHARGE:			
1 PHASE 3 PHASE	-	30.00 55.00	\$0.0 <u>\$0.0</u>
Total Billed with Min Charge			\$0.0
MINIMUM BILL ADJUSTME	NT		\$0.0

#### **ESTIMATE OF TEST YEAR REVENUES**

	BILLING <u>UNITS</u>	UNIT PRICE	REVENUES \$1000S
CUSTOMER CHARGE:	BILLS	\$/month	
1 PHASE - Regular 3 PHASE - Regular	192,429 119,955	30.00 55.00	\$5,772.9 \$6,597.5
SUBTOTAL	312,384		\$12,370.4
ENERGY CHARGE:	(MWH)	<u>¢/kWh</u>	
G: Regular NON-DEMAND	371,800	16.4205	\$ <u>61,051.4</u>
SUBTOTAL	371,800		\$61,051.4
<u>ADJUSTMENTS</u>		Rate	
FUEL OIL ADJUSTMENT: RATE ADJUSTMENT (AES RE MISCELLANEOUS **	EFUND):	1.986 ¢/ł 0.000 (	(WH \$7,383.9 %) \$0.0 (\$0.3)
SUBTOTAL			\$7,383.6
TOTAL REVENUES			\$80,805.4

<sup>\*\*</sup> INCLUDES Schedule E Adj., Service Voltage Adj., Minimum Bill Adjustments, and TOU-C Option 1 Adjustment.

#### Estimate of Test Year Revenues

	PRESENT RATES			
	BILLING UNITS	UNIT PRICE	REVENUES \$000s	
ENERGY CHARGE:	(MWH)	<u>ø/kWh</u>		
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	1,217,611 666,263 184,926	13.5915 12.4436 11.4145	\$165,491.6 \$82,907.1 \$21,108.4	
TOTAL	2,068,800	-	\$269,507.1	
DEMAND CHARGE:	<u>kW</u>	<u>\$/kW</u>		
ALL BILLING KW	6,875,614	8.50	\$58,442.7	
CUSTOMER CHARGE:	BILLS	\$/month		
1 PHASE 3 PHASE	6,621 74,319	50.00 70.00	\$331.1 \$5,202.3	
SUBTOTAL	80,940	-	\$5,533.4	
ADJUSTMENTS:				
POWER FACTOR ADJ. TP VOLT. ADJ. TS VOLT. ADJ. DP VOLT. ADJ. DS VOLT. ADJ.			(\$491.1) (\$80.6) (\$4.0) (\$647.6)	
NETWORK ADJ. Schedule E Adjustment Schedule J - TOU Adjustment SUBTOTAL			(\$19.7) \$79.7 \$0.0 (\$1,163.3)	
UNADJUSTED BASE REVENUE		) =	\$332,319.9	
RATE RIDER & OTHER REVENU	JE ADJ.			
RIDER M(B) RIDER I RIDER T MULTIPLE RIDERS SCHEDULE U			(\$201.6) (\$73.2) (\$462.5) (\$348.8) (\$286.4)	
Total Rate Rider & Other Revenu	e Adjustments		(\$1,372.5)	
Total Base Revenue		:	\$330,947.4	
Fuel Oil Adjustment Rate Adjustment (AES Refund)	¢/kWh %	1.986 0.000%	\$41,086.4 \$0.0	
TOTAL REVENUE	81		\$372,033.8	

### Determination of Billing Loads By Service Phase

	MWH SALES		NO. OF BILLS	
	SALES	PERCENT	NUMBER	PERCENT
	(MWH)	OF TOTAL	OF BILLS	OF TOTAL
RECORDED:				
1 PHASE	58,636.1	2.93	6,436	8.18
3 PHASE	1,941,395.1	97.07	72,287	91.82
TOTAL	2,000,031.2	100.00	78,723	100.00
FORECAST:	PERCENT	SALES	PERCENT	NUMBER
	OF TOTAL	(MWH)	OF TOTAL	OF BILLS
1 PHASE	2.93	60,616	8.18	6,621
3 PHASE	97.07	2,008,184	91.82	74,319
TOTAL	100.00	2,068,800	100.00	80,940

### Determination of TY Billing Loads For TP Voltage Service

### AT 75% Dmd RATCHET (PRESENT RATES) AT 50% Dmd RATCHET (PRESENT RATES)

	Recorded	Forecast	Recorded	Forecast
Sales (MWH):				
TOTAL SCHEDULE J: TP Voltage Service PERCENT OF TOTAL	2,000,031.2 11,554.8 0.58	2,068,800 11,999		2,068,800 11,999
Number Of Bills:				
TOTAL SCHEDULE J: TP Voltage Service PERCENT OF TOTAL	78,723 18 0.02	80,940 16		80,940 16

### Determination of Billing Loads By Rate Block For TP Voltage Service

AT 75% DEMAND RATCHET	SALES		NUMBER OF BILLS			
(PRESENT RATES)	MWH	% OF TOTAL	BILLS	% OF TOTAL		
RECORDED:						
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	10,370.7 1,184.1 -	89.75 10.25 0.00	17 1	94.44 5.56 0.00		
TOTAL	11,554.8	100.00	18	100.00		
FORECAST AT PRESENT RATES:						
	% OF TOTAL	MWH	% OF TOTAL	NO. OF BILLS		
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	89.75 10.25 0.00	10,769 1,230 0	94.44 5.56 0.00	15 1 -		
TOTAL	100.00	11,999	100.00	16		
		.ES	NUMBER	OF BILLS		
(PRESENT RATES)	MWH	% OF TOTAL	BILLS	% OF TOTAL		
RECORDED:						
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	10,370.7 1,184.1 -	89.75 10.25 0.00	17 1 -	94.44 5.56 0.00		
TOTAL	11,554.8	100.00	18	100.00		
FORECAST AT PRESENT RATES:						
	% OF TOTAL	MWH	% OF TOTAL	NO. OF BILLS		
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	89.75 10.25 0.00	10,769 1,230 0	94.44 5.56 0.00	15 1 -		

TOTAL

100.00

16

11,999

100.00

### Determination of Billing Loads By Rate Block For TP Voltage Service

AT 75% DEMAND RATCHET (PRESENT RATES)	RECORDED		KW FORECAST	
(FRESENT RATES)	KW	KWH/KW	75% Dmd Ratchet	50% Dmd Ratchet
LOAD FACTOR BLOCKS:				
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW TOTAL	250,148.2 4,995.8 0.0 255,144.0	41.46 237.02 0.00 45.29	259,744 5,189 0 264,933	259,744 5,189 0 264,933
AT 50% DEMAND RATCHET	RECORDED		KW FORECAST	
(PRESENT RATES)	KW	KWH/KW	75% Dmd Ratchet	50% Dmd Ratchet
LOAD FACTOR BLOCKS:				
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	122,546.4 0.0 0.0	84.63 0.00 0.00	127,248 0 0	127,248 0 0
TOTAL				

### Determination of Billing Loads By Rate Block For TP Voltage Service

	AT 75% DEMAND RATCHET (PRESENT RATES)					
	LOAI	LOAD FACTOR BLOCK (KWH/KW)				
LOAD FACTOR BLOOK	0 - 200	201 - 400	> 400	TOTAL		
LOAD FACTOR BLOCK:						
0 - 200 KWH/KW	10,769	1,038	0	11,807		
201 - 400 KWH/KW	0	192	0	192		
> 400 KWH/KW	0	0	0	0		
TOTAL	10,769	1,230	0	11,999		
FORECAST AT PRESENT RATES:						
SALES-MWH	10,769	1,230	0	11,999		
BILLS	15	1	0	16		
KW, BILLED	259,744	5,189	0	264,933		
		MAND RATCHE	7.0			
	LOA	D FACTOR BLO	CK (KWH/KW	)		
LOAD EAGTOD DI GOL	0 - 200	201 - 400	> 400	TOTAL		
LOAD FACTOR BLOCK						
0 - 200 KWH/KW	10,769	0	0	10,769		
201 - 400 KWH/KW	0	0	0	0		
> 400 KWH/KW	0	1,230	0	1,230		
TOTAL	10,769	1,230	0	11,999		
50550407.47.555504.47.5						
FORECAST AT PRESENT RATES:						
SALES-MWH	10,769	1,230	× <del>=</del>	11,999		
BILLS KW, BILLED	15	1	-	16		
	127,248	100		127,248		

### Determination of TY Revenues For TP Voltage Service

	PRESENT RATES				
	BILLING UNITS	UNIT PRICE	REVENUES \$000s		
ENERGY CHARGE:	MWH	¢/kWh			
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	10,769 - 1,230	13.5915 12.4436 11.4145	\$1,463.7 \$0.0 \$140.4		
TOTAL	11,999		\$1,604.1		
DEMAND CHARGE:	kW 127,248	\$/KW 8.50	\$1,081.6		
TOTAL			\$2,685.7		
	; <del>-</del>	% ADJ.			
TP Voltage Adj		-3.0	(\$80.6)		

Present Rates billing units based on average (50%) demand ratchet effects

### Determination of TY Billing Loads For TS Voltage Service

### AT 75% Dmd RATCHET (PRESENT RATES) AT 50% Dmd RATCHET (PRESENT RATES)

	Recorded	Forecast	Recorded	Forecast
Sales (MWH):				
TOTAL SCHEDULE J: TS Voltage Service PERCENT OF TOTAL	2,000,031.2 764.4 0.04	2,068,800 828		2,068,800 828
Number Of Bills:				
TOTAL SCHEDULE J: TS Voltage Service PERCENT OF TOTAL	78,723 14 0.02	80,940 16		80,940 16

### Determination of Billing Loads By Rate Block For TS Voltage Service

AT 75% DEMAND RATCHET	SALES		NUMBER OF BILLS	
(PRESENT RATES)	MWH	% OF TOTAL	BILLS	% OF TOTAL
RECORDED:				
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	585.4 18.5 160.5	76.58 2.42 21.00	9 2 3	64.29 14.29 21.42
TOTAL	764.4	100.00	14	100.00
FORECAST AT PRESENT RA	TES:	MWH	% OF TOTAL	NO. OF BILLS
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	76.58 2.42 21.00	634 20 174	64.29 14.29 21.42	10 2 4
TOTAL	100.00	828	100.00	16
AT 50% DEMAND RATCHET	SAL	ES	NUMBER	OF BILLS
(PRESENT RATES)	MWH	% OF TOTAL	BILLS	% OF TOTAL
RECORDED:				
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	143.3 13.6 607.5	18.75 1.78 79.47	8 2 4	57.14 14.29 28.57
TOTAL	764.4	100.00	14	100.00
FORECAST AT PRESENT RA	TES:			
	% OF TOTAL	MWH	% OF TOTAL	NO. OF BILLS
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	18.75 1.78 79.47	155 15 658	57.14 14.29 28.57	9 2 5
TOTAL	100.00	828	100.00	16

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### Determination of Billing Loads By Rate Block For TS Voltage Service

AT 75% DEMAND RATCHET	RECOR	IDED	KW FOF	RECAST
(PRESENT RATES)	KW	KWH/KW	75% Dmd Ratchet	50% Dmd Ratchet
LOAD FACTOR BLOCKS:				
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	18,204.7 51.2 72.5	32.16 361.33 2,213.79	19,714 55 79	4,820 42 297
TOTAL	18,328.4	41.71	19,848	5,159
AT 50% DEMAND RATCHET (PRESENT RATES)	RECORDED		KW FORECAST	
(I NESERT HATES)	KW	KWH/KW	75% Dmd Ratchet	50% Dmd Ratchet
LOAD FACTOR BLOCKS:				
0 - 200 KWH/KW	6,991.0	20.50	30,928	7,562
201 - 400 KWH/KW	50.0	272.00	74	55
> 400 KWH/KW	100.0	6,075.00	29	108
TOTAL	7,141.0	107.04	31,031	7,725

### Determination of Billing Loads By Rate Block For TS Voltage Service

	AT 75% DEMAND RATCHET (PRESENT RATES)					
	LOAD FACTOR BLOCK (KWH/KW)					
	0 - 200	201 - 400	> 400	TOTAL		
LOAD FACTOR BLOCK:						
0 - 200 KWH/KW	634	11	16	661		
201 - 400 KWH/KW	0	9	16	25		
> 400 KWH/KW	0	0	142	142		
TOTAL	634	20	174	828		
FORECAST AT PRESENT RATES:						
SALES-MWH	634	20	174	828		
BILLS	10	2	4	16		
KW, BILLED	19,714	55	79	19,848		
		AMND RATCH				
LOAD FACTOR BLOCK	LOA	D FACTOR BLO	OCK (KWH/KW	)		
	LOA 0 - 200	D FACTOR BL0 201 - 400	OCK (KWH/KW > 400	TOTAL		
0 - 200 KWH/KW 201 - 400 KWH/KW	LOA	D FACTOR BLO	OCK (KWH/KW	)		
0 - 200 KWH/KW	LOA 0 - 200	D FACTOR BLC 201 - 400 11	OCK (KWH/KW > 400 22	TOTAL		
0 - 200 KWH/KW 201 - 400 KWH/KW	LOA 0 - 200 155 0	D FACTOR BLO 201 - 400 11 4	OCK (KWH/KW > 400 22 22	TOTAL 188 26		
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW TOTAL	LOA 0 - 200 155 0 0	D FACTOR BLO 201 - 400 11 4 0	> 400 > 400 22 22 614	TOTAL  188 26 614		
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	LOA 0 - 200 155 0 0	D FACTOR BLO 201 - 400 11 4 0	> 400 > 400 22 22 614	TOTAL  188 26 614		
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW TOTAL	LOA 0 - 200 155 0 0	D FACTOR BLO 201 - 400 11 4 0	> 400 > 400 22 22 614	TOTAL  188 26 614		
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW  TOTAL  FORECAST AT PRESENT RATES:	155 0 0 155	201 - 400 11 4 0	> 400 > 400 22 22 614 658	TOTAL  188 26 614 828		

### Determination of TY Revenues For TS Voltage Service

	PRESENT RATES			
	BILLING UNITS	UNIT PRICE	REVENUES \$000s	
ENERGY CHARGE:	MWH	¢/kWh		
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	188 26 614	13.5915 12.4436 11.4145	\$25.6 \$3.2 \$70.1	
TOTAL	828		\$98.9	
DEMAND CHARGE:	kW 7,725	\$/KW 8.50	\$65.7	
TOTAL			\$164.6	
	9 <del>-</del>	% ADJ.		
TS Voltage Adj		-2.4	(\$4.0)	

Present rates billing units based on average demand ratchet

### Determination of TY Billing Loads For Primary Voltage Service

### AT 75% Dmd RATCHET (PRESENT RATES) AT 50% DEMAND RATCHET (PRESENT RATES)

	Recorded	Forecast	Recorded	Forecast
Sales (MWH):				
TOTAL SCHEDULE J: Primary Voltage Service PERCENT OF TOTAL	2,000,031.2 199,860.2 9.99	2,068,800 206,673		2,068,800 206,673
Number Of Bills:				
TOTAL SCHEDULE J: Primary Voltage Service PERCENT OF TOTAL	78,723 1,500 1.91	80,940 1,546		80,940 1,546

### Determination of Billing Loads By Rate Block For Primary Voltage Service

AT 75% DEMAND RATCHET (PRESENT RATES)	SAL	<u>ES</u> _	NUMBER OF BILLS	
(FRESENT NATES)	MWH	% OF TOTAL	BILLS	% OF TOTAL
RECORDED:				
0 - 200 KWH/KW	31,917.3	15.97	229	15.27
201 - 400 KWH/KW	101,313.8	50.69	771	51.40
> 400 KWH/KW	66,629.1	33.34	500	33.33
TOTAL	199,860.2	100.00	1,500	100.00

### **FORECAST AT PRESENT RATES:**

	% OF TOTAL	MWH	% OF TOTAL	NO. OF BILLS
0 - 200 KWH/KW	15.97	33,006	15.27	236
201 - 400 KWH/KW	50.69	104,763	51.40	795
> 400 KWH/KW	33.34	68,904	33.33	515
TOTAL	100.00	206,673	100.00	1,546

## Determination of Billing Loads By Rate Block For Primary Voltage Service

	RECORDED		KW FORECAST	
_	KW	KWH/KW	75% Dmd Ratchet 5 PRESENT	00% Dmd Ratchet PRESENT
LOAD FACTOR BLOCKS:				
0 - 200 KWH/KW	244,543.4	130.52	252,881	192,816
201 - 400 KWH/KW	338,600.7	299.21	350,132	249,893
> 400 KWH/KW	133,578.2	498.80	138,140	78,362
TOTAL	716,722.3	278.85	741,153	521,071

## Determination of Billing Loads By Rate Block For Primary Voltage Service

Using Sch J Extract Data - 75% Ratchet at Present; Average Ratchet at Proposed

AT 75% DEMAND RATCHET	SAL	ES	NUMBER OF BILLS			
(PRESENT RATES)	MWH	% OF TOTAL	BILLS	% OF TOTAL		
RECORDED:						
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	22,989.7 87,653.5 (3,794.5)	21.52 82.04 (3.55)	174 629 373	14.80 53.49 31.71		
TOTAL	106,848.7	100.01	1,176	100.00		
FORECAST AT PRESENT RAT	<u>TES:</u> % OF TOTAL	MWH	% OF TOTAL	NO. OF BILLS		
		<del>-</del>		<del>- 3</del>		
0 - 200 KWH/KW 201 - 400 KWH/KW	21.52 82.04	44,476 169,555	14.80 53.49	229 827		
> 400 KWH/KW	(3.55)	(7,358)	31.71	490		
	(0.00)	1, 1,000)				
TOTAL	100.01	206,673	100.00	1,546		
AT 50% DEMAND RATCHET	SAL	ES	NUMBER	OF BILLS		
(PRESENT RATES)	MWH	% OF TOTAL	BILLS	% OF TOTAL		
RECORDED:						
0 - 200 KWH/KW	25,586.8	15.91	192	16.33		
201 - 400 KWH/KW	92,755.5	57.67	663	56.38		
> 400 KWH/KW	42,506.4	26.43	321	27.29		
TOTAL	160,848.7	100.01	1,176	100.00		
FORECAST AT PRESENT RA	FORECAST AT PRESENT RATES:					
	% OF TOTAL	MWH	% OF TOTAL	NO. OF BILLS		
0 - 200 KWH/KW	15.91	32,882	16.33	252		
201 - 400 KWH/KW	57.67	119,188	56.38	872		
> 400 KWH/KW	26.43	54,603	27.29	422		
TOTAL	100.01	206,673	100.00	1,546		

#### Determination of Billing Loads By Rate Block For Primary Voltage Service

Using Sch J Extract Data - 75% Ratchet at Present; Average Ratchet at Proposed

AT 75% DEMAND RATCHE	RECOF	RDED	KW FORECAST	
(PRESENT RATES)	KW	KWH/KW	75% Dmd Ratchet 50% Dmd Ratchet	
LOAD FACTOR BLOCKS:				
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	143,090.5 297,795.5 103,636.0	160.67 294.34 (36.61)	276,816 576,052 200,983	
TOTAL	544,522.0	196.22	1,053,851	
AT 50% DEMAND RATCHE	RECORDED		KW FORECAST	
(PRESENT RATES)	KW	KWH/KW	75% Dmd Ratchet 50% Dmd Ratchet	
LOAD FACTOR BLOCKS:				
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	164,240.1 319,955.1 88,752.9	155.79 289.90 478.93	211,066 411,135 114,010	
TOTAL	572,948.1	280.74	736,211	

#### Determination of Billing Loads By Rate Block For Primary Voltage Service

	AT 75% DEMAND RATCHET (PRESENT RATES)					
	LOAI	D FACTOR BLO	CK (KWH/KW	)		
LOAD EACTOR BLOCK	0 - 200	201 - 400	> 400	TOTAL		
LOAD FACTOR BLOCK:						
0 - 200 KWH/KW	33,006	70,026	27,628	130,660		
201 - 400 KWH/KW	0	34,737	27,628	62,365		
> 400 KWH/KW	0	0	13,648	13,648		
TOTAL	33,006	104,763	68,904	206,673		
FORECAST AT PRESENT RATES:						
SALES-MWH	33,006	104,763	68,904	206,673		
BILLS	236	795	515	1,546		
KW, BILLED	252,881	350,132	138,140	741,153		
	AT 50% DEMAND RATCHET (PRESENT RATES)  LOAD FACTOR BLOCK (KWH/KW)					
	0 - 200	201 - 400	> 400	TOTAL		
LOAD FACTOR BLOCK						
0 - 200 KWH/KW	32,882	49,979	15,672	98,533		
201 - 400 KWH/KW	0	49,979	15,672	65,651		
> 400 KWH/KW	0	19230	23,259	42,489		
TOTAL	32,882	119,188	54,603	206,673		
FORECAST AT PRESENT RATES:						
SALES-MWH	32,882	119,188	54,603	206,673		
BILLS	252	872	422	1,546		
KW, BILLED	192,816	249,893	78,362	521,071		

#### Determination of TY Revenues For Primary Voltage Service

	PRESENT RATES					
	BILLING UNITS	UNIT PRICE	REVENUES \$000s			
ENERGY CHARGE:	<u>MWH</u>	<u>¢/kWh</u>				
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW TOTAL	98,533 65,651 42,489	13.5915 12.4436 11.4145	\$13,392.1 \$8,169.3 \$4,849.9 \$26,411.3			
DEMAND CHARGE:	200,673 kW	\$/KW	φ20,411.3			
BEIM WE OWN COL		8,000	A			
	521,071	8.50	\$4,429.1			
TOTAL			\$30,840.4			
		% ADJ.				
DP Voltage Adjustment		-2.1	(\$647.6)			

#### Determination of TY Billing Loads For Primary Voltage, Secondary Metering Service

#### AT 75% Dmd RATCHET (PRESENT RATES) AT 50% Dmd RATCHET (PRESENT RATES)

	RECORDED	FORECAST	RECORDED	FORECAST
SALES, MWH:				
TOTAL J: Secondary Metering Adj. PERCENT OF TOTAL	2,000,031.2 20,481.8 1.02	2,068,800 21,102		2,068,800 21,102
NUMBER OF BILLS:				
TOTAL J: Secondary Metering Adj. PERCENT OF TOTAL	78,723 256 0.33	80,940 267		80,940 267

## Billing Loads By Rate Block For Primary Voltage, Secondary Metering Service

AT PRESENT RATES	SALES		NUMBER OF BILLS		
	MWH	% OF TOTAL	BILLS	% OF TOTAL	
RECORDED:					
0 - 200 KWH/KW	601.2	2.94	19	7.42	
201 - 400 KWH/KW	11,259.9	54.98	146	57.03	
> 400 KWH/KW	8,620.7	42.09	91	35.55	
TOTAL	20,481.8	100.01	256	100.00	

## **FORECAST AT PRESENT RATES:**

	% OF TOTAL	MWH	% OF TOTAL	BILLS
0 - 200 KWH/KW	2.94	620	7.42	20
201 - 400 KWH/KW	54.98	11,602	57.03	152
> 400 KWH/KW	42.09	8,880	35.55	95
TOTAL	100.01	21,102	100.00	267

#### Determination of Billing Loads By Rate Block For Secondary Voltage Service

	RECORDED		FORECAST		
	KW	KWH/KW	75% Dmd Ratchet PRESENT	50% Dmd Ratchet PRESENT	
LOAD FACTOR BLOCKS:	· 1				
0 - 200 KWH/KW	3,873.1	155.22	3,994	4,271	
201 - 400 KWH/KW	37,439.5	300.75	38,577	43,189	
> 400 KWH/KW	17,019.4	506.52	17,531	15,420	
TOTAL	58,332.0	351.12	60,102	62,880	

Determination of Billing Loads By Rate Block For Primary Voltage, Secondary Metering Service

Using Sch J Extract Data - 75% Ratchet at Present; Average Ratchet at Proposed

AT 75% DEMAND RATCHET	SAI	LES	NUMBER OF BILLS		
(PRESENT RATES)	MWH	% OF TOTAL	BILLS	% OF TOTAL	
RECORDED:				70 01 , 0 11.2	
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	421.6 8,691.4 8,178.5	2.44 50.26 47.30	8 122 86	3.70 56.48 39.82	
TOTAL	17,291.5	100.00	216	100.00	
			51		
FORECAST AT PRESENT RATES:					
9	% OF TOTAL	MWH	% OF TOTAL	BILLS	
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	2.44 50.26 47.30	515 10,606 9,981	3.70 56.48 39.82	10 151 106	
TOTAL	100.00	21,102	100.00	267	
AT 50% DEMAND RATCHET	SA	LES	NUMBER	OF BILLS	
(PRESENT RATES)	MWH	% OF TOTAL	BILLS	% OF TOTAL	
RECORDED:	~			-	
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	451.8 9,701.6 7,138.1	2.61 56.11 41.28	10 127 79	4.64 58.80 36.57	
TOTAL	17,291.5	100.00	216	100.01	
FORECAST AT PRESENT RATES:					
	% OF TOTAL	MWH	% OF TOTAL	BILLS	
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	2.61 56.11 41.28	551 11,840 8,711	4.64 58.80 36.57	12 157 98	

100.00

**TOTAL** 

100.01

21,102

267

#### Determination of Billing Loads By Rate Block For Secondary Voltage Service

## Using Sch J Extract Data - 75% Ratchet at Present; Average Ratchet at Proposed

AT 75% DEMAND RATCHET	RECORDED		FORECAST		
(PRESENT RATES)	KW	KWH/KW	75% Dmd Ratchet PRESENT	50% Dmd Ratchet PRESENT	
LOAD FACTOR BLOCKS:					
0 - 200 KWH/KW	2,526.6	166.86	3,086		
201 - 400 KWH/KW	29,687.9	292.76	36,228		
> 400 KWH/KW	15,828.6	516.69	19,317		
TOTAL	48,043.1	359.92	58,631		
AT 50% DEMAND RATCHET	RECORDED		FORECAST		
(PRESENT RATES)	KW	KWH/KW	75% Dmd Ratchet PRESENT	50% Dmd Ratchet PRESENT	
LOAD FACTOR BLOCKS:		<u> </u>			
0 - 200 KWH/KW	2,705.5	166.99		3,300	
201 - 400 KWH/KW	33,234.2	291.92		40,559	
> 400 KWH/KW	13,923.4	512.67		16,991	
TOTAL .	49,863.1	346.78		60,850	

Determination of Billing Loads By Rate Block For Primary Voltage, Secondary Metering Service

	AT 75% DEMAND RATCHET (PRESENT RATES)					
_	LOA	AD FACTOR BLO	OCK (KWH/KW	)		
LOAD FACTOR BLOOK	0 - 200	201 - 400	> 400	TOTAL		
LOAD FACTOR BLOCK:						
0 - 200 KWH/KW	620	7,715	3,506	11,841		
201 - 400 KWH/KW	0	3,887	3,506	7,393		
> 400 KWH/KW	0	0	1,868	1,868		
TOTAL	620	11,602	8,880	21,102		
FORECAST AT PRESENT RATES:						
SALES-MWH	620	11,602	8,880	21,102		
BILLS	20	152	95	267		
KW, BILLED	3,994	38,577	17,531	60,102		
	AT 75% D	EMAND RATCH	ET (PRESENT	RATES)		
	LO	AD FACTOR BLO	OCK (KWH/KW	")		
	0 - 200	201 - 400	> 400	TOTAL		
LOAD FACTOR BLOCK:	· · · · · · · · · · · · · · · · · · ·					
0 - 200 KWH/KW	551	8,638	3,084	12,273		
201 - 400 KWH/KW	0	3,202	3,084	6,286		
> 400 KWH/KW	0	0	2,543	2,543		
TOTAL	551	11,840	8,711	21,102		
FORECAST AT PRESENT RATES:						
SALES-MWH	551	11,840	8,711	21,102		
BILLS	12	157	98	267		
KW, BILLED	4,271	43,189	15,420	62,880		

# Determination of TY Revenues For Primary Voltage, Secondary Metering Service

	PF	RESENT RATES	
	BILLING UNITS	UNIT PRICE	REVENUES \$000s
ENERGY CHARGE:	<u>MWH</u>	<u>¢/kWh</u>	
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	12,273 6,286 2,543	13.5915 12.4436 11.4145	\$1,668.1 \$782.2 \$290.3
TOTAL	21,102		\$2,740.6
DEMAND CHARGE:	kW	<u>\$/KW</u>	
	62,880	8.50	\$534.5
Energy & Demand			\$3,275.1
	S.	% Adj.	
DS Voltage Adjustment		(0.6)	(\$19.7)

#### Determination of TY Billing Loads For Network Service

	AT PRESE	NT RATES	AT PROPOSED RATES	
	RECORDED	FORECAST	RECORDED	FORECAST
SALES, MWH:				
TOTAL J: Network Service PERCENT OF TOTAL	2,000,031.2 54,147.3 2.71	2,068,800 56,064	2,000,031.2 54,147.3 2.71	2,068,800 56,064
NUMBER OF BILLS:				
TOTAL J: Network Service PERCENT OF TOTAL	78,723 1,832 2.33	80,940 1,886	78,723 1,832 2.33	80,940 1,886

#### Determination of Billing Loads By Rate Block For Network Service

AT 75% DEMAND RATCHET	SAI	ES	NUMBER OF BILLS		
(PRESENT RATES)	MWH	% OF TOTAL	BILLS	% OF TOTAL	
RECORDED:					
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	1,802.3 45,126.7 7,218.3	3.33 83.34 13.33	232 1,422 178	12.66 77.62 9.72	
> 400 KWI I/KW	853.20	20 90 121			
TOTAL	54,147.3	100.00	1832	100.00	
FORECAST AT PRESENT RAT	<u>ES:</u>				
	% OF TOTAL	MWH	% OF TOTAL	BILLS	
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	3.33 83.34 13.33	1,867 46,724 7,473	12.66 77.62 9.72	239 1,464 183	
TOTAL	100.00	56,064	100.00	1,886	
AT 50% DEMAND RATCHET	SA	LES	NUMBER	OF BILLS	
(PRESENT RATES)	MWH	% OF TOTAL	BILLS	% OF TOTAL	
RECORDED:					
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	1,802.3 45,126.7 7,218.3	3.33 83.34 13.33	232 1,422 178	12.66 77.62 9.72	
TOTAL	54,147.3	100.00	1832	100.00	
FORECAST AT PRESENT RAT	<u>'ES:</u>				
	% OF TOTAL	<u>MWH</u>	% OF TOTAL	BILLS	
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	3.33 83.34 13.33	1,867 46,724 7,473	12.66 77.62 9.72	239 1,464 183	
TOTAL	100.00	56,064	100.00	1,886	

## Determination of Billing Loads By Rate Block For Network Service

AT 75% DEMAND RATCHET	RECOR	DED	FORECAST		
(PRESENT RATES)	KW	KWH/KW	75% Dmd Ratchet	50% Dmd Ratchet	
LOAD FACTOR BLOCKS:			1.00		
0 - 200 KWH/KW	11,021.5	163.53	11,417	11,417	
201 - 400 KWH/KW	143,393.5	314.71	148,467	148,467	
> 400 KWH/KW	15,400.3	468.71	15,944	15,944	
TOTAL	169,815.3	318.86	175,828	175,828	
AT 50% DEMAND RATCHET _ (PRESENT RATES)	RECOR	DED	FORECAST		
(FRESENT RATES)	KW	KWH/KW	75% Dmd Ratchet	50% Dmd Ratchet	
LOAD FACTOR BLOCKS:	**************************************	1			
0 - 200 KWH/KW	11,021.5	163.53	11,417	11,417	
201 - 400 KWH/KW	143,393.5	314.71	148,467	148,467	
> 400 KWH/KW	15,400.3	468.71	15,944	15,944	
TOTAL -	169,815.3	318.86	175,828	175,828	

#### Determination of Billing Loads By Rate Block For Network Service

	75% DEN	MAND RATCHET	Γ (PRESENT RA	ATES)	
	LOA	D FACTOR BLO	OCK (KWH/KW	)	
	0 - 200	201 - 400	> 400	TOTAL	
LOAD FACTOR BLOCK:					
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	1,867 0 0	29,693 17,031 0	3,189 3,189 1,095	34,749 20,220 1,095	
TOTAL	1,867	46,724	7,473	56,064	
FORECAST AT PRESENT RATES:					
SALES-MWH BILLS KW, BILLED	1,867 239 11,417	46,724 1,464 148,467	7,473 183 15,944	56,064 1,886 175,828	
	50% DEM	MAND RATCHE	T (PRESENT RA	ATES)	
	LOA	AD FACTOR BLO	OCK (KWH/KW	<u>()</u>	
LOAD FACTOR BLOCK:	0 - 200	201 - 400	> 400	TOTAL	
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	1,867 0 0	29,693 17,031 0	3,189 3,189 1,095	34,749 20,220 1,095	
TOTAL	1,867	46,724	7,473	56,064	
FORECAST AT PRESENT RATES:					
SALES-MWH BILLS KW, BILLED	1,867 239 11,417	46,724 1,464 148,467	7,473 183 15,944	56,064 1,886 175,828	

#### Determination of TY Revenues For Network Service

	PRESENT RATES				
	BILLING UNITS	UNIT PRICE	REVENUES \$000s		
ENERGY CHARGE:	<u>MWH</u>	<u>ø/kWh</u>			
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW TOTAL	34,749 20,220 1,095 56,064	13.5915 12.4436 11.4145	4,722.9 2,516.1 125.0 7,364.0		
	<u>kW</u>	<u>\$/kW</u>			
DEMAND CHARGE:	175,828	8.50	1,494.5		
Energy & Demand		3	8,858.5		
		% Adj.			
Network Service Adj		0.9	79.7		

## Determination of Billing Loads By Rate Block For Total J

AT PRESENT RATES	SAL	_ES	NUMBER OF BILLS		
**************************************	MWH	% OF TOTAL	BILLS	% OF TOTAL	
RECORDED:					
0 - 200 KWH/KW	155,921.0	7.80	12,540.0	15.93	
201 - 400 KWH/KW	944,310.2	47.21	45,831.0	58.22	
> 400 KWH/KW	899,800.0	44.99	20,352.0	25.85	
TOTAL	2,000,031.2	100.00	78,723	100.00	
FORECAST:	% OF TOTAL	MWH	% OF TOTAL	BILLS	
0 - 200 KWH/KW	7.80	161,366	15.93	12,894	
201 - 200 KWH/KW	47.21	976,680	58.22	47,123	
> 400 KWH/KW	44.99	930,754	25.85	20,923	
TOTAL	100.00	2,068,800	100.00	80,940	

#### Determination of Billing Loads By Rate Block For Total J

	RECORDED		FORECAST		
LOAD FACTOR BLOCKS:	kW	KWH/KW	75% Dmd Ratchet PRESENT	50% Dmd Ratchet PRESENT	
0 - 200 KWH/KW	1,376,872.3	113.24	1,424,991	1,590,254	
201 - 400 KWH/KW	3,181,981.3	296.77	3,291,033	3,546,991	
> 400 KWH/KW	1,830,419.2	491.58	1,893,393	1,738,369	
TOTAL	6,389,272.8	313.03	6,609,417	6,875,614	

#### Determination of Billing Loads By Rate Block For Total J

	AT 75% DEMAND RATCHET (PRESENT RATES)				
	LC	DAD FACTOR BLO	OCK (KWH/KW)		
LOAD FACTOR BLOCK:	0 - 200	201 - 400	> 400	TOTAL	
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	161,366 0 0	658,207 318,473 0	378,679 378,679 173,396	1,198,252 697,152 173,396	
TOTAL	161,366	976,680	930,754	2,068,800	
FORECAST AT PRESENT RATES:					
SALES - MWH BILLS KW, BILLED	161,366 12,894 1,424,991	976,680 47,123 3,291,033	930,754 20,923 1,893,393	2,068,800 80,940 6,609,417	
	AT 50%	DEMAND RATCH	ET (PRESENT R	ATES)	
	LC	DAD FACTOR BLO	OCK (KWH/KW)		
LOAD FACTOR BLOCK:	0 - 200	201 - 400	> 400	TOTAL	
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	160,539 0 0	709,398 318,589 0	347,674 347,674 184,926	1,217,611 666,263 184,926	
TOTAL	160,539	1,027,987	880,274	2,068,800	
FORECAST AT PRESENT RATES:					
SALES - MWH BILLS KW, BILLED	160,539 11,866 1,590,254	1,027,987 48,402 3,546,991	880,274 20,672 1,738,369	2,068,800 80,940 6,875,614	

#### Determination of Billing Loads By Rate Block For Total J

#### Using Sch J Extract Data - 75% Ratchet at Present; Average Ratchet at Proposed

AT 75% DEMAND RATCHET	SAL	ES	NUMBER OF BILLS		
(PRESENT RATES)	MWH	% OF TOTAL	BILLS	% OF TOTAL	
RECORDED:					
0 - 200 KWH/KW	116,367.1	6.59	8,502	12.90	
201 - 400 KWH/KW > 400 KWH/KW	816,327.0 832,289.6	46.25 47.16	461,461 (404,047)	700.07 (612.97)	
TOTAL	1,764,983.7	100.00	65,916	100.00	
TOTAL	1,704,000.7	100.00	00,910	100.00	
FORECAST:	% OF TOTAL	MWH	% OF TOTAL	BILLS	
production and the second seco			<del></del> ))		
0 - 200 KWH/KW	6.59	136,334	12.90	10,441	
201 - 200 KWH/KW > 400 KWH/KW	46.25 47.16	956,820 975,646	700.07 (612.97)	566,637 (496,138)	
	22 82 82	5800 S000000000000		**************************************	
TOTAL	100.00	2,068,800	100.00	80,940	
AT 50% DEMAND RATCHET	SAL	.ES	NUMBER	OF BILLS	
(PRESENT RATES)	MWH	% OF TOTAL	BILLS	% OF TOTAL	
RECORDED:				3 3	
0 - 200 KWH/KW	136,979.5	7.76	9,663	14.66	
201 - 400 KWH/KW > 400 KWH/KW	876,932.9 751,071.3	49.69 42.55	39,417 16,836	59.80 25.54	
TOTAL	1,764,983.7	100.00	65,916	100.00	
TOTAL	1,704,903.7	100.00	05,910	100.00	
FORECAST:	% OF TOTAL	MWH	% OF TOTAL	BILLS	
0 - 200 KWH/KW	7.76	160,539	14.66	11,866	
201 - 200 KWH/KW	49.69	1,027,987	59.80	48,402	
> 400 KWH/KW	42.55	880,274	25.54	20,672	
TOTAL	100.00	2,068,800	100.00	80,940	

## Determination of Billing Loads By Rate Block For Total J

## Using Sch J Extract Data - 75% Ratchet at Present; Average Ratchet at Proposed

AT 75% DEMAND RATCHET	RECOF	RDED	FORECAST		
LOAD FACTOR BLOCKS:	KW	KWH/KW	75% Dmd Ratchet PRESENT	50% Dmd Ratchet PROPOSED	
0 - 200 KWH/KW	1,052,393.5	110.57	1,233,011		
201 - 400 KWH/KW > 400 KWH/KW	2,736,257.6 1,679,323.4	298.34 495.61	3,207,146 1,968,576		
TOTAL	5,467,974.5	322.79	6,408,733		
AT 50% DEMAND RATCHET	RECOF	RDED	FORE	CAST	
LOAD FACTOR BLOCKS:	KW	KWH/KW	PRESENT	PROPOSED	
0 - 200 KWH/KW	1,174,093.3	116.67		1,376,009	
201 - 400 KWH/KW	2,948,688.1	297.40		3,456,580	
> 400 KWH/KW	1,542,105.9	487.04		1,807,396	
TOTAL	5,664,887.3	311.57	•	6,639,985	

#### Determination of Billing Loads By Rate Block For kWm > 200

AT 75% DEMAND RATCHET SALES NUMBER OF BILLS

(PRESENT RATES)	SAL	<u> </u>	NUMBER	NUMBER OF BILLS		
RECORDED:	<u>MWH</u>	<u>e/kWh</u>	<u>ww</u>	g/kWh		
0 - 200 KWH/KW	63,951.9	8.67	686	12.08		
201 - 400 KWH/KW	362,776.9	49.16	2,861	50.36		
> 400 KWH/KW	311,293.7	42.17	2,134	37.56		
TOTAL	738,022.5	100.00	5,681	100.00		
FORECAST:	% OF TOTAL	MWH	% OF TOTAL	BILLS		
0 - 200 KWH/KW	8.67	66,187	12.08	706		
201 - 200 KWH/KW	49.16	375,287	50.36	2,942		
> 400 KWH/KW	42.17	321,925	37.56	2,193		
TOTAL	100.00	763,399	100.00	5,841		
AT PRESENT RATES Using Sch J Extract Da	ita - 75% Ratchet a	t Present; Averag	e (50%) Ratchet a	t Present		
	SAL	ES	NUMBER	OF BILLS		
	MWH	% OF TOTAL	BILLS	% OF TOTAL		
RECORDED:				a : 1020.		
0 - 200 KWH/KW	62,180.8	10.66	650	14.19		
201 - 400 KWH/KW	296,821.5	50.91	2,388	52.13		
> 400 KWH/KW	224,077.3	38.43	1,543	33.68		
TOTAL	583,079.6	100.00	4,581	100.00		
FORECAST:	% OF TOTAL	MWH	% OF TOTAL	BILLS		
0 - 200 KWH/KW	10.66	81,378	14.19	829		
201 - 200 KWH/KW	50.91	388,646	52.13	3,045		
> 400 KWH/KW	38.43	293,375	33.68	1,967		
TOTAL	100.00	763,399	100.00	5,841		
	RECO	ROED	FORE	CAST		
LOAD FACTOR BLOCKS:	кw	KWH/KW	PRESENT	PROPOSED		
0 - 200 KWH/KW	683,528.3	93.56	707,428	763,806		
201 - 400 KWH/KW	1,204,078.5	301.29	1,245,601	1,349,935		
> 400 KWH/KW	626,856,4	496,59	648,271	590,610		
TOTAL	2,514,463.2	293,51	2,601,300	2,704,351		
AT 75% DEMAND RATCHET		LOAD FACTOR B	LOCK (KWH/KW	)		
(PRESENT RATES) LOAD FACTOR BLOCK:	0-200	201 - 400	> 400	TOTAL		
0 - 200 KWH/KW	66,187	249,120	129.654	444,961		
201 - 400 KWH/KW	00,187	126,167	129,654	255,821		
> 400 KWH/KW	Ō	0	62,617	62,617		
TOTAL	66,187	375,287	321,925	763,399		
AT 50% DEMAND RATCHET		LOAD FACTOR E	LOCK (KWH/KW	)		
(PRESENT RATES) LOAD FACTOR BLOCK:	0 - 200	201 - 400	> 400	TOTAL		
0 - 200 KWH/KW	81,378	269,987	118,122	469,487		
201 - 400 KWH/KW	0.0.0	118,659	118,122	236,781		
> 400 KWH/KW	0	0	57,131	57,131		
TOTAL	81,378	300 646	293,375	762 200		
TOTAL	81,3/8	388,646	293,375	763,399		

#### Determination of Billing Loads By Rate Block For kWm > 200

Using Sch J Extract Data - 75% Ratchet at Present; Average Ratchet at Proposed

AT 75% DEMAND RATCHET	SALES		NUMBER OF BILLS	
(PRESENT RATES)	MWH	% OF TOTAL	BILLS	% OF TOTAL
RECORDED:			*****	
0 - 200 KWH/KW	48,140.1	7.58	477	10.18
201 - 400 KWH/KW	313,609.5	49.35	2,363	50.43
> 400 KWH/KW	273,717.4	43.07	1,846	39.39
TOTAL	635,467.0	100.00	4,686	100.00
FORECAST:	% OF TOTAL	MWH	% OF TOTAL	BILLS
0 - 200 KWH/KW	7.58	49,825	10.18	490
201 - 200 KWH/KW	49.35	324,386	50.43	2,430
> 400 KWH/KW	43.07	283,106	39.39	1,898
TOTAL	100.00	657,317	100.00	4,818
AT 50% DEMAND RATCHET	SAL	ES	NUMBER	OF BILLS
(PRESENT RATES)		OF TOTAL	DILLO	01 OF TOTAL
RECORDED:	MWH	% OF TOTAL	BILLS	% OF TOTAL
0 - 200 KWH/KW	54,325.4	8.55	556	11.87
201 - 400 KWH/KW	335,983.6	52.87	2,484	53.01
> 400 KWH/KW	245,158.1	38.58	1,646	35.12
> 400 KVVT//KVV	245,156.1	30.56		33.12
TOTAL	635,467.0	100.00	4,686	100.00
FORECAST:	% OF TOTAL	MWH	% OF TOTAL	BILLS
0 - 200 KWH/KW	8.55	56,201	11.87	572
201 - 200 KWH/KW	52.87	347,523	53.01	2,554
> 400 KWH/KW	38.58	253,593	35.12	1,692
TOTAL	100.00	657,317	100.00	4,818
AT 75% DEMAND RATCHET	peco	RDED	FORE	CAST
(PRESENT RATES)	- neoc	MOLD.	75% Dmd Ratchet	CASI
LOAD FACTOR BLOCKS:	KW	KWH/KW	PRESENT	PROPOSED
0 - 200 KWH/KW	517,422.2	93.04	535,522	
201 - 400 KWH/KW	1,034,073.6	303.28	1,069,592	
> 400 KWH/KW	545,324.1	501.94	564,024	
TOTAL	2,096,819.9	303.06	2,169,138	
AT 50% DEMAND RATCHET	RECO	RDED	FORECAST	
(PRESENT RATES) LOAD FACTOR BLOCKS:	кW	KWH/KW	PRESENT	PROPOSED
\$100 OFFE ACCOUNTY AND A STATE OF				50% Dmd Ratchet
0 - 200 KWH/KW	558,899.3	97.20		578,200
201 - 400 KWH/KW	1,120,688.3	299,80		1,159,183
> 400 KWH/KW	496,765.6	493.51		513,856
TOTAL	2,176,353.2	291.99	Rest.	2,251,239

Revenues for Power Factor Adjustment for Billing Loads By Rate Block For kWm > 200

	PRESENT RATES			
	BILLING UNITS	UNIT PRICE	REVENUES \$000s	
ENERGY CHARGE:	<u>MWH</u>	<u>¢/kWh</u>		
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW TOTAL	469,487 236,781 57,131 763,399	13.5915 12.4436 11.4145	\$63,810.3 \$29,464.1 \$6,521.2 \$99,795.6	
DEMAND CHARGE:	<u>kW</u>	<u>\$/kW</u>		
ALL BILLING KW	2,704,351	8.50	\$22,987.0	
Total Demand and Energy		p.	\$122,782.6	

#### Estimate of PF Adjustment for kWm > 200 kW Customers

#### Recorded

SALES (KWH) KVARHR	738,022,526 376,134,367
POWER FACTOR (%)	89.0
FOR kWM > 200kW	AT PRESENT RATES
CALCULATED PF (%) BASE PF (%)	89.0 85.0
DIFF.	(4.0)
ADJ. FOR EA. 1% DIFF.	0.001
PF ADJ RATE	-0.004
TOTAL DMD + ENGY CHRG	\$122,782.6
Power Factor Adjustment (\$000s)	(\$491.1)

#### Estimate of Test Year Revenues

	F	PRESENT RATES	
	BILLING UNITS	UNIT PRICE	REVENUES \$000s
ENERGY CHARGE:	(MWH)	<u>¢/kWh</u>	
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	1,217,611 666,263 184,926	13.5915 12.4436 11.4145	\$165,491.6 \$82,907.1 \$21,108.4
TOTAL	2,068,800	-	\$269,507.1
DEMAND CHARGE:	<u>kW</u>	\$/kW	
ALL BILLING KW	6,875,614	8.50	\$58,442.7
CUSTOMER CHARGE:	BILLS	\$/month	
1 PHASE 3 PHASE	6,621 74,319	50.00 70.00	\$331.1 \$5,202.3
SUBTOTAL	80,940	•	\$5,533.4
ADJUSTMENTS:			
MISCELLANEOUS **			(\$2,535.8)
Fuel Oil Adjustment Rate Adjustment (AES Refund)	¢/kWh %	1.986 0.000%	\$41,086.4 \$0.0
TOTAL REVENUE			\$372,033.8

<sup>\*\*</sup> INCLUDES Schedule E Adjustment, Service Voltage Adjustments, Power Factor Adjust TOU-C Option 2 Adjustment, and Rider Adjustments.

#### HAWAIIAN ELECTRIC COMPANY, INC. SCHEDULE J - General Service Demand Docket No. 2006-0386, Test-Year 2007

# SUMMARY OF TEST-YEAR REVENUES ADJUSTMENTS FOR RIDER SERVICE AT PRESENT RATES

RIDER M(B)	PRESENT (\$1000s)
Rider Mb J1	(\$13.7)
Rider Mb J2	(\$15.9)
Rider Mb J3	(\$15.4)
Rider Mb J4	(\$24.5)
Rider Mb J5	(\$9.0)
Rider Mb J6	(\$5.0)
Rider Mb J7	(\$13.7)
Rider Mb J8	(\$37.2)
Rider Mb J9	(\$16.6)
Rider Mb J10	(\$10.2)
Rider Mb J11	(\$30.5)
Rider Mb J12	(\$1.3)
Rider Mb J13	(\$2.3)
Rider Mb J14	(\$6.3)
Total Rider Mb	(\$201.6)
	PRESENT
RIDER I	(\$1000s)
Rider I J1	(\$73.2)
Total Rider I	(\$73.2)
	PRESENT
RIDER T	(\$1000s)
Rider T J1	(\$48.6)
Rider T J2	(\$0.7)
Rider T J3	(\$3.0)
Rider T J4	(\$12.8)
Rider T J5	(\$23.2)
Rider T J6	(\$5.2)
Rider T J7	(\$33.5)
Rider T J8	(\$38.0)
Rider T J9	(\$1.4)
Rider T J10	(\$5.3)
Rider T J11	(\$0.9)
Rider T J12	(\$1.2)
Rider T J13	(\$8.0)
Rider T J14 Rider T J15	(\$6.1)
Rider T J16	(\$12.7) (\$56.5)
Rider T J17	(\$39.9)
Rider T J18	(\$33.3)
Rider T J19	(\$31.1)
Rider T J20	(\$1.3)
Rider T J21	\$0.0
Rider T J22	(\$4.0)
Rider T J23	(\$1.8)
Rider T J24	(\$33.2)
Rider T J25	(\$60.8)
TOTAL	(\$462.5)
	PRESENT
MULTIPLE RIDERS	(\$1000s)
Rider Mbl J1	(\$348.8)
TOTAL	(\$348.8)
	PRESENT
SCHEDULE U	(\$1000s)
Sch U J1	(\$87.6)
Sch U J2	(\$30.9)
Sch U J3	(\$58.7)
Sch U J4	(\$109.2)
TOTAL	(\$286.4)

	Billing Units @ Present Rates		Revenues @ Present Rates	
	Sch. J	Rider M(b)	Sch. J	Rider M(b)
Billing Load Per Month:				
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	123.6 28,220 85	122.1 32.0 28,220 0 0 85		
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal On-Peak Surcharge	24,720 3,500 0 28,220	6,400 6,400 15,420 28,220	\$3,360 \$436 \$0 \$3,796	\$870 \$796 \$1,760 \$3,426
Off-Peak Credit Rider T Energy Chargo	e Adjustment	<del>\$0</del> \$0		<del>\$0</del> \$0
<u>Demand Charge:</u> Total kWb	123.6	32.0	\$1,051	\$272
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	e Discount		\$70 \$0 \$0	\$70 \$10 \$0 \$0
Total Base Revenue Pe	er Month		\$4,917	\$3,778
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0
Total Revenue Per Mor	nth		\$4,917	\$3,778
Total Revenue Per Yea	r (\$000s)		\$59.0	\$45.3
Rider Adjustment (\$000	os/Yr)			(\$13.7)

	Billing Units @	Present Rates	Revenues @ P	resent Rates
	Sch. J	Rider M(b)	Sch. J	Rider M(b)
Billing Load Per Month:				
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	173.7 51,267 85	135.9 71.8 51,267 0 0 85		
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	34,740 16,527 0 51,267	14,360 14,360 22,547 51,267	\$4,722 \$2,057 \$0 \$6,779	\$1,952 \$1,787 \$2,574 \$6,313
On-Peak Surcharge Off-Peak Credit Rider T Energy Charg		0 0 0		\$0 \$0 \$0
<u>Demand Charge:</u> Total kWb	173.7	71.8	\$1,476	\$610
Customer Charge Time-of-Day Metering O Primary Voltage Service Power Factor Adjustme	e Discount		\$70 \$0 \$0	\$70 \$10 \$0 \$0
Total Base Revenue Pe	er Month		\$8,325	\$7,003
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0
Total Revenue Per Mor	nth		\$8,325	\$7,003
Total Revenue Per Yea	ır (\$000s)		\$99.9	\$84.0
Rider Adjustment (\$000	Os/Yr)			(\$15.9)

	Billing Units @	Present Rates	Revenues @ P	Revenues @ Present Rates	
	Sch. J3	Rider M(b)	Sch. J3	Rider M(b)	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	332.0 86,200 100	162.8 209.9 86,200 0 0			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	66,400 19,800 0 86,200	41,980 41,980 2,240 86,200	\$9,025 \$2,464 \$0 \$11,489	\$5,706 \$5,224 \$256 \$11,186	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		0 0 0		\$0 \$0 \$0	
<u>Demand Charge:</u> Total kWb	332.0	209.9	\$2,822	\$1,784	
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	e Discount		\$70 (\$301) (\$215)	\$70 \$10 (\$272) (\$195)	
Total Base Revenue Pe	er Month		\$13,865	\$12,583	
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mor	nth		\$13,865	\$12,583	
Total Revenue Per Yea	ır (\$000s)		\$166.4	\$151.0	
Rider Adjustment (\$000	0s/Yr)			(\$15.4)	

	Billing Units @	Present Rates	Revenues @ Present Rates	
	Sch. J3	Rider M(b)	Sch. J3	Rider M(b)
Billing Load Per Month:				
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	424.5 90,333 65	253.8 234.1 90,333 0 0 65		
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	84,900 5,433 0 90,333	46,820 43,513 0 90,333	\$11,539 \$676 \$0 \$12,215	\$6,364 \$5,415 <u>\$0</u> \$11,779
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		0 0 0		\$0 \$0 \$0
<u>Demand Charge:</u> Total kWb	424.5	234.1	\$3,608	\$1,990
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	Discount		\$70 (\$332) \$316	\$70 \$10 (\$289) \$275
Total Base Revenue Pe	er Month		\$15,877	\$13,835
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0
Total Revenue Per Mor	nth		\$15,877	\$13,835
Total Revenue Per Yea	r (\$000s)		\$190.5	\$166.0
Rider Adjustment (\$000	)s/Yr)			(\$24.5)

	Billing Units @	Present Rates	Revenues @ P	Revenues @ Present Rates	
	Sch. J	Rider M(b)	Sch. J	Rider M(b)	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	100.8 32,013 85	75.3 44.3 32,013 0 0 85			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	20,160 11,853 0 32,013	8,860 8,860 14,293 32,013	\$2,740 \$1,475 \$0 \$4,215	\$1,204 \$1,103 \$1,631 \$3,938	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		0 0 0		\$0 \$0 \$0	
Demand Charge: Total kWb	100.8	44.3	\$857	\$377	
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	e Discount		\$70 \$0 \$0	\$70 \$10 \$0 \$0	
Total Base Revenue Pe	er Month		\$5,142	\$4,395	
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mor	nth		\$5,142	\$4,395	
Total Revenue Per Yea	ır (\$000s)		\$61.7	\$52.7	
Rider Adjustment (\$000	Os/Yr)			(\$9.0)	

	Billing Units @	Present Rates	Revenues @ P	Revenues @ Present Rates	
	Sch. J	Rider M(b)	Sch. J	Rider M(b)	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	136.0 27,687 85	52.3 96.8 27,687 0 0			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	27,200 487 0 27,687	19,360 8,327 0 27,687	\$3,697 \$61 <u>\$0</u> \$3,758	\$2,631 \$1,036 <u>\$0</u> \$3,667	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		0 0 0		\$0 \$0 \$0	
Demand Charge: Total kWb	136.0	96.8	\$1,156	\$823	
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	e Discount		\$70 \$0 \$0	\$70 \$10 \$0 \$0	
Total Base Revenue Pe	er Month		\$4,984	\$4,570	
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mor	nth		\$4,984	\$4,570	
Total Revenue Per Yea	r (\$000s)		\$59.8	\$54.8	
Rider Adjustment (\$000	)s/Yr)			(\$5.0)	

	Billing Units @	Present Rates	Revenues @ P	Revenues @ Present Rates	
	Sch. J4	Rider M(b)	Sch. J4	Rider M(b)	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	530.5 162,200 99	145.2 421.6 162,200 0 0 99			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	106,100 56,100 0 162,200	84,320 77,880 0 162,200	\$14,421 \$6,981 \$0 \$21,402	\$11,460 \$9,691 \$0 \$21,151	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		0 0 0		\$0 \$0 \$0	
Demand Charge: Total kWb	530.5	421.6	\$4,509	\$3,584	
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustmen	Discount		\$70 (\$155) (\$363)	\$70 \$10 (\$148) (\$346)	
Total Base Revenue Pe	r Month		\$25,463	\$24,321	
Fuel Oil Adjustment Rate Adjustment (AES I IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mon	th		\$25,463	\$24,321	
Total Revenue Per Year	r (\$000s)		\$305.6	\$291.9	
Rider Adjustment (\$000	s/Yr)			(\$13.7)	

	Billing Units @ Present Rates		Revenues @ Present Rates	
	Sch. J	Rider M(b)	Sch. J	Rider M(b)
Billing Load Per Month:				
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	510.7 173,100 88	307.9 279.8 173,100 0 0 88		
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	102,140 70,960 0 173,100	55,960 55,960 61,180 173,100	\$13,882 \$8,830 \$0 \$22,712	\$7,606 \$6,963 \$6,983 \$21,552
On-Peak Surcharge 0 Off-Peak Credit 0 Rider T Energy Charge Adjustment 0			\$0 \$0 \$0	
<u>Demand Charge:</u> Total kWb	510.7	279.8	\$4,341	\$2,378
Customer Charge Time-of-Day Metering Charge Primary Voltage Service Discount Power Factor Adjustment			\$70 \$0 (\$81)	\$70 \$10 \$0 (\$72)
Total Base Revenue Per Month			\$27,042	\$23,938
Fuel Oil Adjustment Rate Adjustment (AES Refund) IRP Adjustment DSM Adjustment			\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0
Total Revenue Per Month			\$27,042	\$23,938
Total Revenue Per Year (\$000s)			\$324.5	\$287.3
Rider Adjustment (\$000s/Yr)				(\$37.2)

	Billing Units @	Present Rates	Revenues @ P	Revenues @ Present Rates	
	Sch. J	Rider M(b)	Sch. J	Rider M(b)	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	437.0 140,960 84	155.3 320.5 140,960 0 0 84	ь		
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	87,400 53,560 0 140,960	64,100 64,100 12,760 140,960	\$11,879 \$6,665 \$0 \$18,544	\$8,712 \$7,976 \$1,456 \$18,144	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		0 		\$0 \$0 \$0	
<u>Demand Charge:</u> Total kWb	437.0	320.5	\$3,715	\$2,724	
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	Discount		\$70 \$0 \$22	\$70 \$10 \$0 \$21	
Total Base Revenue Pe	er Month		\$22,351	\$20,969	
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mor	nth		\$22,351	\$20,969	
Total Revenue Per Yea	ır (\$000s)		\$268.2	\$251.6	
Rider Adjustment (\$000	)s/Yr)			(\$16.6)	

	Billing Units @	Present Rates	Revenues @ Present Rates	
	Sch. J	Rider M(b)	Sch. J	Rider M(b)
Billing Load Per Month:				
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	205.0 44,973 85	106.0 125.5 44,973 0 0 85		
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	41,000 3,973 0 44,973	25,100 19,873 0 44,973	\$5,573 \$494 \$0 \$6,067	\$3,411 \$2,473 \$0 \$5,884
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		0 0 0		\$0 \$0 \$0
<u>Demand Charge:</u> Total kWb	205.0	125.5	\$1,743	\$1,067
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	e Discount		\$70 \$0 \$0	\$70 \$10 \$0 \$0
Total Base Revenue Pe	er Month		\$7,880	\$7,031
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0
Total Revenue Per Mor	nth		\$7,880	\$7,031
Total Revenue Per Yea	ır (\$000s)		\$94.6	\$84.4
Rider Adjustment (\$000	)s/Yr)			(\$10.2)

	Billing Units @	Present Rates	Revenues @ P	Revenues @ Present Rates	
	Sch. J	Rider M(b)	Sch. J	Rider M(b)	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	371.1 204,300 96	230.3 198.4 204,300 0 0 96			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	74,220 74,220 55,860 204,300	39,680 39,680 124,940 204,300	\$10,088 \$9,236 \$6,376 \$25,700	\$5,393 \$4,938 \$14,261 \$24,592	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		0 0		\$0 \$0 \$0	
Demand Charge: Total kWb	371.1	198.4	\$3,154	\$1,686	
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	Discount		\$70 \$0 (\$317)	\$70 \$10 \$0 (\$289)	
Total Base Revenue Pe	er Month		\$28,607	\$26,069	
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mor	nth		\$28,607	\$26,069	
Total Revenue Per Yea	r (\$000s)		\$343.3	\$312.8	
Rider Adjustment (\$000	)s/Yr)			(\$30.5)	

	Billing Units @	Present Rates	Revenues @ P	Revenues @ Present Rates	
	Sch. J	Rider M(b)	Sch. J	Rider M(b)	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	191.6 37,013 85	16.4 179.3 37,013 0 0 85		×	
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	37,013 0 0 37,013	35,860 1,153 0 37,013	\$5,031 \$0 \$0 \$5,031	\$4,874 \$143 \$0 \$5,017	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		0 0		\$0 \$0 \$0	
<u>Demand Charge:</u> Total kWb	191.6	179.3	\$1,629	\$1,524	
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	Discount		\$70 \$0 \$0	\$70 \$10 \$0 \$0	
Total Base Revenue Pe	er Month		\$6,730	\$6,621	
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mor	nth		\$6,730	\$6,621	
Total Revenue Per Yea	r (\$000s)		\$80.8	\$79.5	
Rider Adjustment (\$000	)s/Yr)			(\$1.3)	

	Billing Units @	Present Rates	Revenues @ F	Revenues @ Present Rates	
	Sch. J	Rider M(b)	Sch. J	Rider M(b)	
Billing Load Per Month:				· F	
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	94.3 38,920 85	34.9 68.1 38,920 0 0 85			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	18,860 18,860 1,200 38,920	13,620 13,620 11,680 38,920	\$2,563 \$2,347 \$137 \$5,047	\$1,851 \$1,695 \$1,333 \$4,879	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		0 		\$0 \$0 \$0	
Demand Charge: Total kWb	94.3	68.1	\$802	\$579	
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	e Discount		\$70 \$0 \$0	\$70 \$10 \$0 \$0	
Total Base Revenue Pe	er Month		\$5,919	\$5,538	
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mor	nth		\$5,919	\$5,538	
Total Revenue Per Yea	ur (\$000s)		\$71.0	\$66.5	
Rider Adjustment (\$000	Os/Yr)			(\$2.3) Half Year	

	Billing Units @	Present Rates	Revenues @ P	Revenues @ Present Rates	
	Sch. J	Rider M(b)	Sch. J	Rider M(b)	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	877.2 400,480 81	47.6 841.5 400,480 0 0			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	175,440 175,440 49,600 400,480	168,300 168,300 63,880 400,480	\$23,845 \$21,831 \$5,662 \$51,338	\$22,874 \$20,943 \$7,292 \$51,109	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charg		0 0		\$0 \$0 \$0	
<u>Demand Charge:</u> Total kWb	877.2	841.5	\$7,456	\$7,153	
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	e Discount		\$70 \$0 \$235	\$70 \$10 \$0 \$233	
Total Base Revenue Pe	er Month		\$59,099	\$58,575	
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mor	nth		\$59,099	\$58,575	
Total Revenue Per Yea	ar (\$000s)		\$709.2	\$702.9	
Rider Adjustment (\$000	Os/Yr)	8.		(\$6.3)	

## Rider I J1

	Billing Units @ F	Present Rates	Revenues @ Present Rates	
	Sch. J3	Rider I	Sch. J3	Rider I
Billing Load Per Month:				
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	2,461.4 255,000	0.0 1,723.0 255,000 0 0 93	interruptible=2350	
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	255,000 0 0 255,000	255,000 0 0 255,000	\$34,658 \$0 <u>\$0</u> \$34,658	\$34,658 \$0 \$0 \$34,658
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		0 0 0	_	\$0 \$0 \$0
<u>Demand Charge:</u> Total kWb	2,461.4	1,723.0	\$20,922	\$14,646
Customer Charge	Nh		\$70	\$70
Time-of-Day Metering ( Primary Voltage Service Power Factor Adjustme	e Discount		(\$1,167) (\$445)	(\$1,035) (\$394)
Total Base Revenue Pe	er Month		\$54,038	\$47,945
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0
Total Revenue Per Mor	nth		\$54,038	\$47,945
Total Revenue Per Yea	ar (\$000s)		\$648.5	\$575.3
Rider Adjustment (\$000	Os/Yr)			(\$73.2)

	Billing Units @	Present Rates	Revenues @ Pi	Revenues @ Present Rates	
	Sch. J3	Rider T	Sch. J3	Rider T	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	6,191.1 1,247,195 85	5,946.3 1,247,195 718,799 528,396 85			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	1,238,220 8,975 0 1,247,195	1,189,260 57,935 0 1,247,195	\$168,293 \$1,117 \$0 \$169,410	\$161,638 \$7,209 \$0 \$168,847	
Off-Peak Credit 528,		718,799 528,396 1,247,195		\$14,376 (\$15,852) (\$1,476)	
<u>Demand Charge:</u> Total kWb	6,191.1	5,946.3	\$52,624	\$50,544	
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	e Discount		\$70 (\$4,663) \$0	\$70 \$10 (\$4,607) \$0	
Total Base Revenue Pe	er Month		\$217,441	\$213,388	
Fuel Oil Adjustment Rate Adjustment (AES Refund) IRP Adjustment DSM Adjustment		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0		
Total Revenue Per Mor	nth		\$217,441	\$213,388	
Total Revenue Per Yea	ır (\$000s)		\$2,609.3	\$2,560.7	
Rider Adjustment (\$000	0s/Yr)			(\$48.6)	

Rider T J2

	Billing Units @	Present Rates	Revenues @ Present Rates	
	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:				
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	38.8 2,440 85	36.3 2,440 573 1,867 85		
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal On-Peak Surcharge Off-Peak Credit	2,440 0 0 2,440	2,440 0 0 2,440 573 1,867	\$332 \$0 \$0 \$332	\$332 \$0 \$0 \$332 \$11 (\$56)
Rider T Energy Charge	e Adjustment	2,440	2	(\$45)
<u>Demand Charge:</u> Total kWb	38.8	36.3	\$330	\$309
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	Discount		\$70 \$0 \$0	\$70 \$10 \$0 \$0
Total Base Revenue Pe	er Month		\$732	\$676
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0 \$0_	\$0 \$0 \$0 \$0
Total Revenue Per Mor	nth		\$732	\$676
Total Revenue Per Yea	ır (\$000s)		\$8.8	\$8.1
Rider Adjustment (\$000	)s/Yr)			(\$0.7)

	Billing Units @ I	Present Rates	Revenues @ Pr	Revenues @ Present Rates	
	Sch. J	Rider T	Sch. J	Rider T	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	116.8 54,440 85	116.8 54,440 27,360 27,080 85			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	23,360 23,360 7,720 54,440	23,360 23,360 7,720 54,440	\$3,175 \$2,907 \$881 \$6,963	\$3,175 \$2,907 \$881 \$6,963	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		27,360 27,080 54,440		\$547 (\$812) (\$265)	
Demand Charge: Total kWb	116.8	116.8	\$993	\$993	
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	Discount		\$70 \$0 \$0	\$70 \$10 \$0 \$0	
Total Base Revenue Pe	r Month		\$8,026	\$7,771	
Fuel Oil Adjustment Rate Adjustment (AES I IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mon	th		\$8,026	\$7,771	
Total Revenue Per Yea	r (\$000s)		\$96.3	\$93.3	
Rider Adjustment (\$000	s/Yr)			(\$3.0)	

Rider T J4

	Billing Units @ I	Present Rates	Revenues @ Pr	Revenues @ Present Rates	
	Sch. J	Rider T	Sch. J	Rider T	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	292.0 77,527 88	290.4 77,527 25,340 52,187 88			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	58,400 19,127 0 77,527	58,080 19,447 0 77,527	\$7,937 \$2,380 \$0 \$10,317	\$7,894 \$2,420 \$0 \$10,314	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		25,340 52,187 77,527		\$507 (\$1,566) (\$1,059)	
Demand Charge: Total kWb	292.0	290.4	\$2,482	\$2,468	
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	e Discount		\$70 \$0 (\$38)	\$70 \$10 \$0 (\$38)	
Total Base Revenue Pe	er Month		\$12,831	\$11,765	
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mor	nth		\$12,831	\$11,765	
Total Revenue Per Yea	r (\$000s)		\$154.0	\$141.2	
Rider Adjustment (\$000	)s/Yr)			(\$12.8)	

	Billing Units @	Present Rates	Revenues @ Present Rates	
	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:				
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	436.7 107,040 84	287.7 107,040 57,580 49,460 84		
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	87,340 19,700 0 107,040	57,540 49,500 0 107,040	\$11,871 \$2,451 \$0 \$14,322	\$7,821 \$6,160 \$0 \$13,981
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		57,580 49,460 107,040		\$1,152 (\$1,484) (\$332)
<u>Demand Charge:</u> Total kWb	436.7	287.7	\$3,712	\$2,445
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	e Discount		\$70 \$0 \$18	\$70 \$10 \$0 \$16
Total Base Revenue Pe	er Month		\$18,122	\$16,190
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0
Total Revenue Per Mor	nth		\$18,122	\$16,190
Total Revenue Per Yea	r (\$000s)		\$217.5	\$194.3
Rider Adjustment (\$000	)s/Yr)			(\$23.2)

Rider T J6

	Billing Units @ I	Present Rates	Revenues @ Pr	Revenues @ Present Rates	
	Sch. J	Rider T	Sch. J	Rider T	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	202.7 31,080 88	192.4 31,080 11,507 19,573 88			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	31,080 0 0 31,080	31,080 0 0 31,080	\$4,224 \$0 \$0 \$4,224	\$4,224 \$0 \$0 \$4,224	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		11,507 19,573 31,080		\$230 (\$587) (\$357)	
Demand Charge: Total kWb	202.7	192.4	\$1,723	\$1,635	
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	e Discount		\$70 \$0 (\$18)	\$70 \$10 \$0 (\$18)	
Total Base Revenue Pe	er Month		\$5,999	\$5,564	
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mor	nth		\$5,999	\$5,564	
Total Revenue Per Year (\$000s)		\$72.0	\$66.8		
Rider Adjustment (\$000	os/Yr)			(\$5.2)	

Rider T J7

	Billing Units @ P	resent Rates	Revenues @ Present Rates	
	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:				
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	359.4 700 100	25.0 700 400 300 100		
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	700 0 0 700	700 0 0 700	\$95 \$0 \$0 \$95	\$95 \$0 \$0 \$95
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		400 300 700	,	\$8 (\$9) (\$1)
Demand Charge: Total kWb	359.4	25.0	\$3,055	\$213
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	Discount		\$70 \$0 (\$47)	\$70 \$10 \$0 (\$5)
Total Base Revenue Pe	er Month		\$3,173	\$382
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0
Total Revenue Per Mor	nth		\$3,173	\$382
Total Revenue Per Yea	r (\$000s)		\$38.1	\$4.6
Rider Adjustment (\$000	)s/Yr)			(\$33.5)

Rider T J8

	Billing Units @ F	resent Rates	rii	Revenues @ Present Rates	
	Sch. J	Rider T		Sch. J	Rider T
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	399.2 667 85	25.0 667 400 267 85			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal On-Peak Surcharge Off-Peak Credit		667 0 0 667 400 267	). <del>-</del>	\$91 \$0 \$0 \$91	\$91 \$0 \$0 \$91 \$8 (\$8)
Rider T Energy Charge	e Adjustment	667			\$0
<u>Demand Charge:</u> Total kWb	399.2	25.0		\$3,393	\$213
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	Discount			\$70 \$0 \$0	\$70 \$10 \$0 \$0
Total Base Revenue Pe	er Month			\$3,554	\$384
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)			\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0
Total Revenue Per Mor	nth			\$3,554	\$384
Total Revenue Per Yea	r (\$000s)			\$42.6	\$4.6
Rider Adjustment (\$000	)s/Yr)				(\$38.0)

Rider T J9

	Billing Units @ F	Present Rates	Revenues @ P	Revenues @ Present Rates	
	Sch. J	Rider T	Sch. J	Rider T	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	131.8 17,993 85	131.6 17,993 8,153 9,840 85			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	17,993 0 0 17,993	17,993 0 0 17,993	\$2,446 \$0 \$0 \$2,446	\$2,446 \$0 \$0 \$2,446	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge	(8)	8,153 9,840 17,993		\$163 (\$295) (\$132)	
<u>Demand Charge:</u> Total kWb	131.8	131.6	\$1,120	\$1,119	
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	e Discount		\$70 \$0 \$0	\$70 \$10 \$0 \$0	
Total Base Revenue Pe	er Month		\$3,636	\$3,513	
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mor	nth		\$3,636	\$3,513	
Total Revenue Per Yea	ır (\$000s)		\$43.6	\$42.2	
Rider Adjustment (\$000	)s/Yr)			(\$1.4)	

	Billing Units @ I	Present Rates	Revenues @ Pr	Revenues @ Present Rates	
	Sch. J	Rider T	Sch. J	Rider T	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	190.9 17,113 85	173.8 17,113 4,040 13,073 85			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	17,113 0 0 17,113	17,113 0 0 17,113	\$2,326 \$0 \$0 \$2,326	\$2,326 \$0 \$0 \$2,326	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		4,040 13,073 17,113		\$81 (\$392) (\$311)	
Demand Charge: Total kWb	190.9	173.8	\$1,623	\$1,477	
Customer Charge Time-of-Day Metering Charge Primary Voltage Service Discount Power Factor Adjustment		\$70 \$0 \$0	\$70 \$10 \$0 \$0		
Total Base Revenue Pe	er Month		\$4,019	\$3,572	
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mor	nth		\$4,019	\$3,572	
Total Revenue Per Yea	ır (\$000s)		\$48.2	\$42.9	
Rider Adjustment (\$000	)s/Yr)			(\$5.3)	

	Billing Units @ F	Present Rates	Revenues @ Pi	Revenues @ Present Rates	
	Sch. J	Rider T	Sch. J	Rider T	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	39.2 17,847 85	39.2 17,847 8,947 8,900 85			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal  On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		7,840 7,840 2,167 17,847 8,947 8,900 17,847	\$1,066 \$976 \$247 \$2,289	\$1,066 \$976 \$247 \$2,289 \$179 (\$267) (\$88)	
<u>Demand Charge:</u> Total kWb	39.2	39.2	\$333	\$333	
Customer Charge Time-of-Day Metering ( Primary Voltage Service Power Factor Adjustme	e Discount		\$70 \$0 \$0	\$70 \$10 \$0 \$0	
Total Base Revenue Pe	er Month		\$2,692	\$2,614	
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mor	nth		\$2,692	\$2,614	
Total Revenue Per Yea	ır (\$000s)		\$32.3	\$31.4	
Rider Adjustment (\$000	Os/Yr)			(\$0.9)	

Rider T J12

	Billing Units @	Present Rates	Revenues @ Pr	Revenues @ Present Rates	
	Sch. J	Rider T	Sch. J	Rider T	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	65.6 25,367 85	65.6 25,367 13,067 12,300 85			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	13,120 12,247 0 25,367	13,120 12,247 0 25,367	\$1,783 \$1,524 \$0 \$3,307	\$1,783 \$1,524 \$0 \$3,307	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charg		13,067 12,300 25,367		\$261 (\$369) (\$108)	
<u>Demand Charge:</u> Total kWb	65.6	65.6	\$558	\$558	
Customer Charge Time-of-Day Metering ( Primary Voltage Servic Power Factor Adjustme	e Discount		\$70 \$0 \$0	\$70 \$10 \$0 \$0	
Total Base Revenue Po	er Month		\$3,935	\$3,837	
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mo	nth		\$3,935	\$3,837	
Total Revenue Per Yea	ar (\$000s)		\$47.2	\$46.0	
Rider Adjustment (\$00	0s/Yr)			(\$1.2)	

	Billing Units @ Present Rates		Revenues @ Present Rates	
	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:				
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	79.2 10,519 85	25.0 10,519 3,466 7,053 85		
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal On-Peak Surcharge	10,519 0 0 10,519	5,000 5,000 519 10,519 3,466	\$1,430 \$0 \$0 \$1,430	\$680 \$622 \$59 \$1,361
Off-Peak Credit Rider T Energy Charge	e Adjustment	7,053 10,519		(\$212) (\$143)
Demand Charge: Total kWb	79.2	25.0	\$673	\$213
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	e Discount		\$70 \$0 \$0	\$70 \$10 \$0 \$0
Total Base Revenue Pe	er Month		\$2,173	\$1,511
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0
Total Revenue Per Mor	nth		\$2,173	\$1,511
Total Revenue Per Yea	ır (\$000s)		\$26.1	\$18.1
Rider Adjustment (\$000	)s/Yr)			(\$8.0)

	Billing Units @ F	Present Rates	Revenues @ Pi	Revenues @ Present Rates	
	Sch. J	Rider T	Sch. J	Rider T	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	62.6 9,480 85	25.0 9,480 2,767 6,713 85			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	9,480 0 0 9,480	5,000 4,480 0 9,480	\$1,288 \$0 \$0 \$1,288	\$680 \$557 \$0 \$1,237	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		2,767 6,713 9,480		\$55 (\$201) (\$146)	
Demand Charge: Total kWb	62.6	25.0	\$532	\$213	
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	e Discount		\$70 \$0 \$0	\$70 \$10 \$0 \$0	
Total Base Revenue Pe	er Month		\$1,890	\$1,384	
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mor	nth		\$1,890	\$1,384	
Total Revenue Per Yea	ır (\$000s)		\$22.7	\$16.6	
Rider Adjustment (\$000	)s/Yr)			(\$6.1)	

			Revenues @ Present Rates	
	Billing Units @	Present Hates	Revenues @ Pr	esent Hates
	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:				
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	198.6 19,073 85	109.6 19,073 5,220 13,853 85		
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal On-Peak Surcharge Off-Peak Credit	19,073 0 0 19,073	19,073 0 0 19,073 5,220 13,853	\$2,592 \$0 \$0 \$2,592	\$2,592 \$0 \$0 \$2,592 \$104 (\$416)
Rider T Energy Charge Adjustment		19,073	29	(\$312)
<u>Demand Charge:</u> Total kWb	198.6	109.6	\$1,688	\$932
Customer Charge Time-of-Day Metering Charge Primary Voltage Service Discount Power Factor Adjustment			\$70 \$0 \$0	\$70 \$10 \$0 \$0
Total Base Revenue Pe	er Month		\$4,350	\$3,292
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0
Total Revenue Per Mor	nth		\$4,350	\$3,292
Total Revenue Per Yea	ar (\$000s)		\$52.2	\$39.5
Rider Adjustment (\$000	Os/Yr)			(\$12.7)

	Billing Units @ F	Present Rates	Revenues @ Pr	Revenues @ Present Rates	
	Sch. J	Rider T	Sch. J	Rider T	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	246.4 60,853	25.0 60,853 613 60,240 83			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal On-Peak Surcharge	49,280 11,573 0 60,853	5,000 5,000 50,853 60,853	\$6,698 \$1,440 <u>\$0</u> \$8,138	\$680 \$622 \$5,805 \$7,107	
Off-Peak Credit Rider T Energy Charge	e Adjustment	60,240 60,853	5	(\$1,807) (\$1,795)	
Demand Charge: Total kWb	246.4	25.0	\$2,094	\$213	
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	e Discount		\$70 \$0 \$20	\$70 \$10 \$0 \$15	
Total Base Revenue Pe	er Month		\$10,322	\$5,620	
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mor	nth		\$10,322	\$5,620	
Total Revenue Per Yea	ır (\$000s)		\$123.9	\$67.4	
Rider Adjustment (\$000	)s/Yr)			(\$56.5)	

	Billing Units @	Present Rates	Revenues @ P	Revenues @ Present Rates	
	Sch. J	Rider T	Sch. J	Rider T	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	219.7 35,720 83	25.0 35,720 240 35,480 83			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	35,720 0 0 35,720	5,000 5,000 25,720 35,720	\$4,855 \$0 \$0 \$4,855	\$680 \$622 \$2,936 \$4,238	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		240 35,480 35,720		\$5 (\$1,064) (\$1,059)	
<u>Demand Charge:</u> Total kWb	219.7	25.0	\$1,867	\$213	
Customer Charge Time-of-Day Metering Charge Primary Voltage Service Discount Power Factor Adjustment		\$70 \$0 \$13	\$70 \$10 \$0 \$9		
Total Base Revenue Pe	er Month		\$6,805	\$3,481	
Fuel Oil Adjustment Rate Adjustment (AES Refund) IRP Adjustment DSM Adjustment		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0		
Total Revenue Per Month			\$6,805	\$3,481	
Total Revenue Per Year (\$000s)			\$81.7	\$41.8	
Rider Adjustment (\$000	)s/Yr)			(\$39.9)	

	Billing Units @ F	resent Rates	Revenues @ Pr	Revenues @ Present Rates	
	Sch. J	Rider T	Sch. J	Rider T	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	222.3 24,607 88	25.0 24,607 0 24,607 88			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	24,607 0 0 24,607	5,000 5,000 14,607 24,607	\$3,344 \$0 \$0 \$3,344	\$680 \$622 \$1,667 \$2,969	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		24,607 24,607		\$0 (\$738) (\$738)	
<u>Demand Charge:</u> Total kWb	222.3	25.0	\$1,890	\$213	
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	e Discount		\$70 \$0 (\$16)	\$70 \$10 \$0 (\$10)	
Total Base Revenue Pe	er Month		\$5,288	\$2,514	
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mor	nth		\$5,288	\$2,514	
Total Revenue Per Yea	r (\$000s)		\$63.5	\$30.2	
Rider Adjustment (\$000	)s/Yr)			(\$33.3)	

	Billing Units @ I	Present Rates	Revenues @ Pi	Revenues @ Present Rates	
	Sch. J	Rider T	Sch. J	Rider T	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	181.5 30,180 85	25.3 30,180 2,540 27,640 85			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	30,180 0 0 30,180	5,060 5,060 20,060 30,180	\$4,102 \$0 \$0 \$0 \$4,102	\$688 \$630 \$2,290 \$3,608	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		2,540 27,640 30,180		\$51 (\$829) (\$778)	
<u>Demand Charge:</u> Total kWb	181.5	25.3	\$1,543	\$215	
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	e Discount		\$70 \$0 \$0	\$70 \$10 \$0 \$0	
Total Base Revenue Pe	er Month		\$5,715	\$3,125	
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mor	nth		\$5,715	\$3,125	
Total Revenue Per Yea	r (\$000s)		\$68.6	\$37.5	
Rider Adjustment (\$000	)s/Yr)			(\$31.1)	

	Billing Units @	Present Rates	Revenues @ Pr	Revenues @ Present Rates	
	Sch. J	Rider T	Sch. J	Rider T	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	34.6 15,587 85	34.6 15,587 7,067 8,520 85			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	6,920 6,920 1,747 15,587	6,920 6,920 1,747 15,587	\$941 \$861 \$199 \$2,001	\$941 \$861 \$199 \$2,001	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charg		7,067 8,520 15,587		\$141 (\$256) (\$115)	
<u>Demand Charge:</u> Total kWb	34.6	34.6	\$294	\$294	
Customer Charge Time-of-Day Metering Primary Voltage Servic Power Factor Adjustme	e Discount		\$70 \$0 \$0	\$70 \$10 \$0 \$0	
Total Base Revenue Per Month			\$2,365	\$2,260	
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mo	nth		\$2,365	\$2,260	
Total Revenue Per Yea	ar (\$000s)		\$28.4	\$27.1	
Rider Adjustment (\$00	0s/Yr)			(\$1.3)	

Ceased rider billing effective 02/01/06 Rider T J21

	Billing Units @ P	resent Rates	Revenues @ Pr	Revenues @ Present Rates	
	Sch. J	Rider T	Sch. J	Rider T	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	41.1 19,920	41.0 19,920 10,700 9,220 85			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	8,220 8,220 3,480 19,920	8,200 8,200 3,520 19,920	\$1,117 \$1,023 \$397 \$2,537	\$1,115 \$1,020 \$402 \$2,537	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge	GPO 1999	10,700 9,220 19,920	,	\$214 (\$277) (\$63)	
<u>Demand Charge:</u> Total kWb	41.1	41.0	\$349	\$349	
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	e Discount		\$70 \$0 \$0	\$70 \$10 \$0 \$0	
Total Base Revenue Pe	er Month		\$2,956	\$2,903	
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mor	nth		\$2,956	\$2,903	
Total Revenue Per Yea	ır (\$000s)		\$35.5	\$34.8	
Rider Adjustment (\$000	)s/Yr)			(\$0.7)	

Rider T J22

	Billing Units @ Present Rates		Revenues @ Present Rates	
	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:				
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	123.2 17,320 85	110.8 17,320 5,680 11,640 85		
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	17,320 0 0 17,320	17,320 0 0 17,320	\$2,354 \$0 \$0 \$2,354	\$2,354 \$0 \$0 \$2,354
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		5,680 11,640 17,320		\$114 (\$349) (\$235)
Demand Charge: Total kWb	123.2	110.8	\$1,047	\$942
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	Discount		\$70 \$0 \$0	\$70 \$10 \$0 \$0
Total Base Revenue Pe	er Month		\$3,471	\$3,141
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0
Total Revenue Per Mor	nth		\$3,471	\$3,141
Total Revenue Per Yea	r (\$000s)		\$41.7	\$37.7
Rider Adjustment (\$000	)s/Yr)			(\$4.0)

	Billing Units @ Present Rates		Revenues @ Present Rates	
	Sch. J	Rider T	Sch. J	Rider T
Billing Load Per Month:				
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	35.2 14,927 85	34.8 14,927 5,973 8,954 85		
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal On-Peak Surcharge Off-Peak Credit		6,960 6,960 1,007 14,927 5,973 8,954	\$957 \$876 \$97 \$1,930	\$946 \$866 \$115 \$1,927 \$119 (\$269)
Rider T Energy Charge  Demand Charge:	e Adjustment	14,927		(\$150)
Total kWb	35.2	34.8	\$299	\$296
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustmen	Discount		\$70 \$0 \$0	\$70 \$10 \$0 \$0
Total Base Revenue Pe	r Month		\$2,299	\$2,153
Fuel Oil Adjustment Rate Adjustment (AES I IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0
Total Revenue Per Mon	th		\$2,299	\$2,153
Total Revenue Per Year	r (\$000s)		\$27.6	\$25.8
Rider Adjustment (\$000	s/Yr)			(\$1.8)

	Billing Units @	Present Rates	Revenues @ P	Revenues @ Present Rates	
	Sch. J	Rider T	Sch. J	Rider T	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	302.5 62,400 87	145.0 62,400 16,700 45,700 87			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	60,500 1,900 0 62,400	29,000 29,000 4,400 62,400	\$8,223 \$236 \$0 \$8,459	\$3,942 \$3,609 \$502 \$8,053	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		16,700 45,700 62,400		\$334 (\$1,371) (\$1,037)	
<u>Demand Charge:</u> Total kWb	302.5	145.0	\$2,571	\$1,233	
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	Discount		\$70 \$0 (\$22)	\$70 \$10 \$0 (\$19)	
Total Base Revenue Pe	r Month		\$11,078	\$8,310	
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mon	ith		\$11,078	\$8,310	
Total Revenue Per Yea	r (\$000s)		\$132.9	\$99.7	
Rider Adjustment (\$000	)s/Yr)			(\$33.2)	

	Billing Units @	Present Rates	Revenues @ Pr	Revenues @ Present Rates	
	Sch. J	Rider T	Sch. J	Rider T	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	429.0 34,944 87	25.0 34,944 0 34,944 87			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	34,944 0 0 34,944	5,000 5,000 24,944 34,944	\$4,749 \$0 \$0 \$4,749	\$680 \$622 \$2,847 \$4,149	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		0 34,944 34,944	-	\$0 (\$1,048) (\$1,048)	
<u>Demand Charge:</u> Total kWb	429.0	25.0	\$3,647	\$213	
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustmen	Discount		\$70 \$0 (\$17)	\$70 \$10 \$0 (\$9)	
Total Base Revenue Pe	r Month		\$8,449	\$3,385	
Fuel Oil Adjustment Rate Adjustment (AES I IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mon	th		\$8,449	\$3,385	
Total Revenue Per Year	r (\$000s)		\$101.4	\$40.6	
Rider Adjustment (\$000	s/Yr)			(\$60.8)	

	Billing Units @	Present Rates	Revenues @ F	Revenues @ Present Rates	
	Sch. J3	Riders M(b)&I	Sch. J3	Riders M(b)&I	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	3,894.5 218,000 68	593.7 218,000 0 0 68			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	218,000 0 0 218,000	118,740 99,260 0 218,000	\$29,629 \$0 \$0 \$29,629	\$16,139 \$12,352 \$0 \$28,491	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		0 0 0		\$0 \$0 \$0	
<u>Demand Charge:</u> Total kWb	3,894.5	593.7	\$33,103	\$5,046	
Customer Charge Time-of-Day Metering C Primary Voltage Service Power Factor Adjustme	Discount		\$70 (\$1,317) \$1,066	\$70 \$10 (\$704) \$570	
Total Base Revenue Pe	er Month		\$62,551	\$33,483	
Fuel Oil Adjustment Rate Adjustment (AES Refund) IRP Adjustment DSM Adjustment		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0		
Total Revenue Per Mor	nth		\$62,551	\$33,483	
Total Revenue Per Yea	r (\$000s)		\$750.6	\$401.8	
Rider Adjustment (\$000	s/Yr)			(\$348.8)	

### Sch U J1

	Billing Units @ F	Present Rates	Revenues @ Pre	Revenues @ Present Rates	
	Sch. J	Sch. U	Sch. J	Sch. U	
Billing Load Per Month:				ė	
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	597.3 117,287 91	91.0 117,287 493 116,793 91			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	117,287 0 0 117,287		\$15,941 \$0 \$0 \$15,941		
On-Peak kWh Off-Peak kWh Rider U Energy Charg	e	493 116,793 117,286	-	\$68 \$11,679 \$11,747	
Demand Charge: Total kWb	597.3	91.0	\$5,077	\$1,638	
Customer Charge Primary Voltage Service Power Factor Adjustme			\$70 \$0 (\$126)	\$350 \$0 (\$80)	
Total Base Revenue Pe	er Month		\$20,962	\$13,655	
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mor	nth		\$20,962	\$13,655	
Total Revenue Per Yea	ur (\$000s)		\$251.5	\$163.9	
Rider Adjustment (\$000	)s/Yr)			(\$87.6)	

## Sch U J2

	Billing Units @ F	Present Rates	Revenues @ Pr	Revenues @ Present Rates	
	Sch. J	Sch. U	Sch. J	Sch. U	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	284.3 36,033	40.6 36,033 3,073 32,960 89			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	36,033 0 0 36,033		\$4,897 \$0 \$0 \$4,897		
On-Peak kWh Off-Peak kWh Rider U Energy Charg	e	3,073 32,960 36,033	,	\$422 \$3,296 \$3,718	
Demand Charge: Total kWb	284.3	40.6	\$2,417	\$731	
Customer Charge Primary Voltage Service Power Factor Adjustme			\$70 \$0 (\$29)	\$350 \$0 (\$18)	
Total Base Revenue Pe	er Month		\$7,355	\$4,781	
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mor	ith		\$7,355	\$4,781	
Total Revenue Per Yea	r (\$000s)		\$88.3	\$57.4	
Rider Adjustment (\$000	s/Yr)			(\$30.9)	

## Sch U J3

	Billing Units @	Present Rates	Revenues @ Pre	Revenues @ Present Rates	
	Sch. J	Sch. U	Sch. J	Sch. U	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	365.8 81,227 96	36.5 81,227 1,313 79,913 96			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	73,160 8,067 0 81,227		\$9,944 \$1,004 <u>\$0</u> \$10,948		
On-Peak kWh Off-Peak kWh Rider U Energy Charg	e	1,313 79,913 81,226	-	\$180 \$7,991 \$8,171	
Demand Charge: Total kWb	365.8	36.5	\$3,109	\$657	
Customer Charge Primary Voltage Service Power Factor Adjustme			\$70 \$0 (\$155)	\$350 \$0 (\$97)	
Total Base Revenue Pe	er Month		\$13,972	\$9,081	
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mor	nth		\$13,972	\$9,081	
Total Revenue Per Yea	ır (\$000s)		\$167.7	\$109.0	
Rider Adjustment (\$000	)s/Yr)			(\$58.7)	

# Hawaiian Electric Company, Inc. Schedule J - General Service Demand Docket No. 2006-0386, Test-Year 2007

# Sch U J4

	Billing Units @ P	resent Rates	Revenues @ Pre	Revenues @ Present Rates	
	Sch. J	Sch. U	Sch. J	Sch. U	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor	614.0 135,220 95	25.0 135,220 280 134,940 95			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	122,800 12,420 0 135,220		\$16,690 \$1,545 \$0 \$18,235		
On-Peak kWh Off-Peak kWh Rider U Energy Charg	е	280 134,940 135,220	-	\$38 \$13,494 \$13,532	
Demand Charge: Total kWb	614.0	25.0	\$5,219	\$450	
Customer Charge Primary Voltage Service Power Factor Adjustme			\$70 \$0 (\$235)	\$350 \$0 (\$140)	
Total Base Revenue Pe	er Month		\$23,289	\$14,192	
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mor	nth		\$23,289	\$14,192	
Total Revenue Per Yea	ır (\$000s)		\$279.5	\$170.3	
Rider Adjustment (\$000	Os/Yr)			(\$109.2)	

	91	89	96	95						
PF %										
kvarhr	54953	18707	23087	46660	Mod U Bill Incr h	-38%	-34%	-40%	-45%	
off-peak kWh	116793	32960	79913	134940	Mod U at Present g	\$16,633.29	\$5,693.64	\$11,145.12	\$17,631.88	
on-peak o kWh k	493	3073	1313	280	Save vs J at Present f	\$7,277.70	\$2,563.68	\$4,871.39	\$9,060.52	0.020000
kWh k	117287	36033	81227	135220	Save vs J at Propsd e=a-d	\$8,251.41	\$2,836.16	\$5,547.58	\$10,233.18	0.110063
U KWb · k	91	40.6	36.5	25.0	Mod U	\$10,249.02	\$3,753.16	\$6,711.17	\$10,202.10	l on-peak l off-peak
Kwm	597.3	284.3	365.8	614	All on-peak is mid-peak J-TOU c	\$8,944.08	\$3,106.75	\$5,959.13	\$9,482.37	0.090063 U on-peak U off-peak
on-peak Kwm	84	40.6	22.5	ဇာ	A is PS at Proposed b	\$21,129.77	\$8,653.51	\$13,852.47	\$22,883.76	Avg Sch PS
# Mos	12	12	12	12	J at Proposed a	\$18,500.43	\$6,589.32	\$12,258.75	\$20,435.29	ď
Data Period	1/05-12/05	1/05-12/05	1/05-12/05	1/05-12/05	Based on Avg Parameters	'n	UZ	ก3	U4	

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# HAWAIIAN ELECTRIC COMPANY, INC. Docket No. 2006-0386, Test-Year 2007 SCHEDULE H - COMMERCIAL COOKING, HEATING, AIR CONDITIONING AND REFRIGERATION SERVICE

#### **ESTIMATE OF TEST YEAR REVENUES**

# PRESENT RATES

	BILLING <u>UNITS</u>	UNIT PRICE		REVENUES \$1000S
	<u>MWH</u>	¢/kWh		
ENERGY CHARGE;	40,500	13.4312		\$5,439.6
	<u>kW</u>	\$/kW_		
DEMAND CHARGE:	74,222	9.00		\$668.0
CUSTOMER CHARGE:	_BILLS	_\$/month		
1 PHASE 3 PHASE	2,721 6,231	25.00 60.00		\$68.0 \$ <u>373.9</u>
SUBTOTAL	8,952			\$441.9
SCHEDULE E ADJUSTMEN	<b>F</b>			\$0.0
TOTAL BASE REVENUE				\$6,549.5
ADJUSTMENTS		<u>Rate</u>		
FUEL OIL ADJUSTMENT: RATE ADJUSTMENT (AES I	REFUND):	1.986 0.000	¢/KWH (%)	\$804.3 \$0.0
UNADJUSTED TOTAL REV			\$7,353.8	
RIDER ADJUSTMENTS				\$0,0
TOTAL REVENUES	3			\$7,353.8

# DETERMINATION OF TEST-YEAR BILLING LOADS

	NO. OF	BILLS	MWH S	BALES
	NUMBER OF BILLS	PERCENT OF TOTAL	MWH SALES	PERCENT OF TOTAL
RECORDED:				
RATE H:	11,481	100.0	52,468	100.0
TOTAL	11,481	100.0	52,468	100.0
	NO. OF	BILLS	<u>MWH S</u>	SALES
	PERCENT OF TOTAL	NUMBER OF BILLS	PERCENT OF TOTAL	MWH SALES
FORECASTS:				
RATE H:	100.0	8,952	100.0	40,500
TOTAL	100.0	8,952	100.0	40,500

#### DETERMINATION OF TEST-YEAR BILLING LOADS BY SERVICE PHASE

	NUMBER OF BILLS	PERCENT OF TOTAL	BILLED KW	KWH/KW
RECORDED:				
RATE H:				
1 PHASE 3 PHASE	3,488 7,993	30.4 <u>69.6</u>	17,492.1 78,663.9	
TOTAL	11,481	100.0	96,156.0	
RATES H TOTAL				
1 PHASE 3 PHASE	3,488 7,993	30.4 <u>69.6</u>	17,492.1 78,663.9	
TOTAL	11,481	100.0	96,156.0	545.66
	PERCENT OF TOTAL	NUMBER OF BILLS		
FORECASTS:				
1 PHASE 3 PHASE	30.4 69.6	2,721 6,231		
TOTAL	100.0	8,952	74,222	

#### DETERMINATION OF TEST-YEAR BILLS BY SERVICE PHASE

	PERCENT OF TOTAL	NUMBER OF BILLS	
FORECAST:			
RATE H:			
1 PHASE 3 PHASE	30.4 69.6	2,721 6,231	
TOTAL	100.0	8.952	

# **ESTIMATE OF TEST YEAR REVENUES**

# PRESENT RATES

	BILLING <u>UNITS</u>	UNIT PRICE		REVENUES _\$1000S
	<u>MWH</u>	<u>¢/kWh</u>		
ENERGY CHARGE:	40,500	13.4312		\$5,439.6
	<u>kW</u>	\$/kW_		
DEMAND CHARGE:	74,222	9.00		\$668.0
CUSTOMER CHARGE:	BILLS	_\$/month		
1 PHASE 3 PHASE	2,721 6,231	25.00 60.00		\$68.0 \$ <u>373.9</u>
SUBTOTAL	8,952			\$441.9
ADJUSTMENTS		<u>Rate</u>		
FUEL OIL ADJUSTMENT: RATE ADJUSTMENT (AES F MISCELLANEOUS **	REFUND):	1.986 0.000	¢/KWH (%)	\$804.3 \$0.0 \$0.0
TOTAL REVENUES				\$7,353.8

#### **ESTIMATE OF TEST YEAR REVENUES**

# PRESENT RATES

	BILLING <u>UNITS</u>	UNIT PRICE	REVENUES \$1000S
ENERGY CHARGE:	(MWH)	¢/kWh	
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	366,774 338,271 130,812	12.2456 11.4473 11.1379	\$44,913.7 \$38,722.9 \$ <u>14,569.7</u>
SUBTOTAL	835,857		\$98,206.3
DEMAND CHARGE:	<u>(kW)</u>	<u>\$/kW</u>	
0 - 500 KW 501 - 1500 KW > 1500 KW	1,034,937 479,646 367,120	14.35 13.85 12.85	\$14,851.3 \$6,643.1 \$4,717.5
SUBTOTAL	1,881,703		\$26,211.9
	<u>BILLS</u>	\$/month	
CUSTOMER CHARGE:	2,303	350.00	\$806.1
ADJUSTMENTS:			
POWER FACTOR ADJ. NETWORK ADJ. Schedule E Adjustment			(\$995.3) \$212.3 \$ <u>0.0</u>
SUBTOTAL			(\$783.0)
UNADJUSTED BASE REVENUE		,-	\$124,441.3
RATE RIDER & OTHER REVENUE	E ADJ.		
RIDER M (B) RIDER I RIDER T RULE 4 CHP CONTRACTS AD.	J.		(\$59.3) \$0.0 (\$2.0) \$0.0
Total Rate Rider & Other Revenue	Adjustments		(\$61.3)
TOTAL BASE REVENUE		; <del>-</del>	\$124,380.0
Fuel Oil Adjustment Rate Adjustment (AES Refund)	¢/kWh %	1.986 0.000%	\$16,600.1 \$0.0
TOTAL REVENUE		g. <del>-</del>	\$140,980.1

# DISTRIBUTION OF SALES & BILLS BY VOLTAGE SUPPLY SERVICE

RECORDED:	NUMBER OF BILLS	PERCENT OF TOTAL	MWH SALES	PERCENT OF TOTAL	<u>GVARH</u>
PT1 PT2 PP3 PP4 PS5 PS	48 1,845 89 190 2,103	1.1 0.0 43.2 2.1 4.4 <u>49.2</u>	176,509 0 2,043,078 20,902 154,413 <u>680,486</u>	5.7 0.0 66.4 0.7 5.0 <u>22.2</u>	24.918397 0.000000 564.711787 5.168016 43.961400 272.886220
TOTAL	4,275	100.0	3,075,389	100.0	911.645820
FORECASTS:	PERCENT OF TOTAL	NUMBER OF BILLS	PERCENT OF TOTAL	MWH SALES	
PT1 PT2 PP3 PP4 PS5 PS	1.1 0.0 43.2 2.1 4.4 49.2	47 1,856 90 189 2,114	5.7 0.0 66.4 0.7 5.0 <u>22.2</u>	175,161 0 2,040,472 21,511 153,650 682,206	
TOTAL	100.0	4,296	100.0	3,073,000	

#### DETERMINATION OF TEST-YEAR BILLING KW BY VOLTAGE SUPPLY SERVICE

	RECOR	DED	<u>FORECASTS</u>	
TYPE OF CUSTOMERS:	<u>KW</u>	KWH/KW	<u>KW</u>	KWH/KW
PT1 PT2	286,539	616.00	284,352	616.00
PP3	4,126,052	495.17	4,120,750	495.17
PP4	41,061	509.06	42,256	509.06
PS5	401,830	384.28	399,839	384.28
PS .	1,478,133	460.37	1,481,865	460.37
TOTAL	6,333,615.3	485.57	6,329,062	485.57

#### DETERMINATION OF TEST-YEAR BILLING LOADS FOR SCHEDULE PS5 CUSTOMERS

	UPPER LIM. OF BLK. AS % OF AVE. USE/BILL	CUM UNIT @ EA. UPPER LIM. AS % OF TOTAL	% UNITS BILLED IN EA. BLOCK	UNITS BILLED IN EA. BLOCK
DEMAND CHARGE: 0 - 500 KW	23.63	23.63	23.63	94,482
501 - 1500 KW > 1500 KW	70.90	63.31 100.00	39.68 36.69	158,656 146,701
TOTAL			100.00	399,839
ENERGY CHARGE:				
0 - 200 KWH/KW 201 - 400 KWH/KW		49.08	49.08	75,411
> 400 KWH/KW		91.48 100.00	42.40 8.52	65,148 13,090
TOTAL			100.00	153,650
FORECASTS:	5			
0.1.50 1.0101				

SALES, MWH	153,650
BILLS	189
KW	399,839
KWH/BILL	812,963
KW/BILL	2,116

#### DETERMINATION OF REVENUES AND NETWORK ADJ. FOR NETWORK SERVICE

		PRESENT RATES		
Rate Block	Billing Units	Unit Price	Revenues \$000s	
DEMAND CHARGE:	<u>kW</u>	<u>\$/kW</u>		
0 - 500 KW 501 - 1500 KW > 1500 KW	94,482 158,656 146,701	14.35 13.85 12.85	\$1,355.8 \$2,197.4 \$1,885.1	
SUBTOTAL	399,839		\$5,438.3	
ENERGY CHARGE:	<u>MWH</u>	<u>¢/kWh</u>		
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	75,411 65,148 13,090	12.2456 11.4473 11.1379	\$9,234.5 \$7,457.7 \$1,458.0	
SUBTOTAL	153,649		\$18,150.2	
Total Demand & Energy		=	\$23,588.5	
Supply Voltage Adj. Network Adjustment		<u>% Adj.</u> 0.9	\$212.3	

# DETERMINATION OF TEST-YEAR BILLING LOADS FOR SCHEDULE PS CUSTOMERS

	UPPER LIM. OF BLK. AS % OF AVE. USE/BILL	CUM UNIT @ EA. UPPER LIM. AS % OF TOTAL	% UNITS BILLED IN EA. BLOCK	UNITS BILLED IN EA. BLOCK
DEMAND CHARGE: 0 - 500 KW 501 - 1500 KW > 1500 KW	61.19 183.58	55.00 80.49 100.00	55.00 25.49 19.51	1,034,937 479,646 367,120
TOTAL			100.00	1,881,704
ENERGY CHARGE: 0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW		43.88 84.35 100.00	43.88 40.47 15.65	366,774 338,271 130,812
TOTAL			100.00	835,856

# **FORECASTS:**

SALES, MWH	835,856
BILLS	2,303
KW	1,881,704
KWH/BILL	362,942
KW/BILL	817

# **DETERMINATION OF POWER FACTOR ADJUSTMENT**

	Recorded	Forecast
Kwh Kvarhrs	834,898,806 316,847,620	
POWER FACTOR CALCULATED	93.49	93.49
	Present Rates	
CALCULATED PF (%) BASE PF (%)	93.0 85.0	
DIFFERENCE	(8.0)	
ADJ. FOR EA. 1% DIFF.	0.001	
PF ADJUSTMENT RATE	(800.0)	
Demand + Energy Charges	\$124,418.2	
POWER FACTOR ADJUSTMENT	(\$995.3)	

#### **ESTIMATE OF TEST YEAR REVENUES**

#### PRESENT RATES

	BILLING <u>UNITS</u>	UNIT PRICE	REVENUES \$1000S
ENERGY CHARGE:	(MWH)	ø/kWh	
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	366,774 338,271 130,812	12.2456 11.4473 11.1379	\$44,913.7 \$38,722.9 \$ <u>14,569.7</u>
SUBTOTAL	835,857		\$98,206.3
DEMAND CHARGE:	<u>(kW)</u>	<u>\$/kW</u>	
0 - 500 KW 501 - 1500 KW > 1500 KW	1,034,937 479,646 367,120	14.35 13.85 12.85	\$14,851.3 \$6,643.1 \$4,717.5
SUBTOTAL	1,881,703		\$26,211.9
	<b>BILLS</b>	\$/month	
CUSTOMER CHARGE:	2,303	350.00	\$806.1
ADJUSTMENTS:			
MISCELLANEOUS ** Fuel Oil Adjustment Rate Adjustment (AES Refund)	¢/kWh %	1.986 0.000%	(\$844.3) \$16,600.1 \$0.0
TOTAL REVENUE			\$140,980.1

# SUMMARY OF TEST-YEAR REVENUES ADJUSTMENTS FOR RIDER SERVICE AT PRESENT RATES

RIDER M(B)	PRESENT (\$1000s)	
Rider Mb PS1 Rider Mb PS2 Rider Mb PS3 Rider Mb PS4	(\$2.3) (\$21.9) \$0.0 (\$35.1)	ref: CA-IR-193; Transferred to Rider Mb J14
TOTAL	(\$59.3)	
RIDER I	PRESENT (\$1000s)	
TOTAL	\$0.0	
RIDER T	PRESENT (\$1000s)	
Rider T PS1	(\$2.0)	
TOTAL	(\$2.0)	
RULE 4 CHP CUSTOMERS	PRESENT (\$1000s)	
TOTAL	\$0.0	

# Rider T PS1

	Billing L	<u>Jnits</u>	Revenues @ Pi	Revenues @ Present Rates	
	Sch. PS	Rider T	Sch. PS	Rider T	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor kVarhr Per Month	1,053.7 509,100 88 279,100	1,047.3 509,100 304,033 205,067 88 279,100			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	210,740 210,740 87,620 509,100	209,460 209,460 90,180 509,100	\$25,806 \$24,124 \$9,759 \$59,689	\$25,650 \$23,978 \$10,044 \$59,672	
On-Peak Surcharge Off-Peak Credit		304,033 205,067		\$6,081 (\$6,152)	
Rider T Energy Charge	Adjustment	509,100		(\$71)	
Demand Charge: 0 - 500 kWb 501 - 1500 kWb >1500 kWb Subtotal	500.0 553.7 0.0 1,053.7	500.0 547.3 0.0 1,047.3	\$7,175 \$7,669 <u>\$0</u> \$14,844	\$7,175 \$7,580 \$0 \$14,755	
Customer Charge Time-of-Day Metering C Power Factor Adjustmer kVarhr Charge			\$350 (\$224) \$0	\$350 \$10 (\$223) \$0	
Total Base Revenue Pe	r Month		\$74,659	\$74,493	
Fuel Oil Adjustment Rate Adjustment (AES F IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Mon	th		\$74,659	\$74,493	
Total Revenue Per Year	· (\$000s)		\$895.9	\$893.9	
Rider Adjustment (\$000	s/Yr)			(\$2.0)	

	Billing	<u>Units</u>	Revenues @ P	resent Rates
	Sch. PS	Rider M(b)	Sch. PS	Rider M(b)
Billing Load Per Month:				
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor kVarhr Per Month	671.4 317,600 89 160,240	16.2 659.2 317,600 0 0 89 160,240		
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	134,280 134,280 49,040 317,600	131,840 131,840 53,920 317,600	\$16,443 \$15,371 \$5,462 \$37,276	\$16,145 \$15,092 \$6,006 \$37,243
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge	e Adjustment	0 0		\$0 \$0 \$0
Demand Charge: 0 - 500 kWb 501 - 1500 kWb >1500 kWb Subtotal	500.0 171.4 0.0 671.4	500.0 159.2  659.2	\$7,175 \$2,374 <u>\$0</u> \$9,549	\$7,175 \$2,205 \$0 \$9,380
Customer Charge Time-of-Day Metering C Power Factor Adjustmen kVarhr Charge			\$350 (\$187) \$0	\$350 \$10 (\$186) \$0
Total Base Revenue Pe	r Month		\$46,988	\$46,797
Fuel Oil Adjustment Rate Adjustment (AES I IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0
Total Revenue Per Mon	th		\$46,988	\$46,797
Total Revenue Per Year	r (\$000s)		\$563.9	\$561.6
Rider Adjustment (\$000	s/Yr)			(\$2.3)

	Billing	<u>Units</u>	Revenues @ P	resent Rates
	Sch. PS	Rider M(b)	Sch. PS	Rider M(b)
Billing Load Per Month:				
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor kVarhr Per Month	769.0 335,567 100 24,033	149.0 657.2 335,567 0 0 100 24,033		
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	153,800 153,800 27,967 335,567	131,440 131,440 72,687 335,567	\$18,834 \$17,606 \$3,115 \$39,555	\$16,096 \$15,046 \$8,096 \$39,238
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge	Adjustment	0 0		\$0 \$0 \$0
Demand Charge: 0 - 500 kWb 501 - 1500 kWb >1500 kWb Subtotal	500.0 269.0 0.0 769.0	500.0 157.2 0.0 657.2	\$7,175 \$3,726 \$0 \$10,901	\$7,175 \$2,177 \$0 \$9,352
Customer Charge Time-of-Day Metering C Power Factor Adjustmer kVarhr Charge			\$350 (\$757) \$0	\$350 \$10 (\$729) \$0
Total Base Revenue Pe	r Month		\$50,049	\$48,221
Fuel Oil Adjustment Rate Adjustment (AES F IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0
Total Revenue Per Mon	th		\$50,049	\$48,221
Total Revenue Per Year	· (\$000s)		\$600.6	\$578.7
Rider Adjustment (\$000	s/Yr)			(\$21.9)

	Billing	<u>Units</u>	Revenues @ P	resent Rates
	Sch. PS	Rider M(b)	Sch. PS	Rider M(b)
Billing Load Per Month:				
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor kVarhr Per Month	877.2 400,480 81 286,380	47.6 841.5 400,480 0 0 81 286,380		
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	175,440 175,440 49,600 400,480	168,300 168,300 63,880 400,480	\$21,484 \$20,083 \$5,524 \$47,091	\$20,609 \$19,266 \$7,115 \$46,990
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		0 0		\$0 \$0 \$0
Demand Charge: 0 - 500 kWb 501 - 1500 kWb >1500 kWb Subtotal	500.0 377.2 0.0 877.2	500.0 341.5 0.0 841.5	\$7,175 \$5,224 \$0 \$12,399	\$7,175 \$4,730 \$0 \$11,905
Customer Charge Time-of-Day Metering C Power Factor Adjustment kVarhr Charge			\$350 \$238 \$0_	\$350 \$10 \$236 \$0
Total Base Revenue Pe	r Month		\$60,078	\$59,491
Fuel Oil Adjustment Rate Adjustment (AES I IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0
Total Revenue Per Mon	th		\$60,078	\$59,491
Total Revenue Per Yea	r (\$000s)		\$720.9	\$713.9
Rider Adjustment (\$000	s/Yr)			(\$7.0)

	Billing	<u>Units</u>	Revenues @ P	resent Rates
	Sch. PS	Rider M(b)	Sch. PS	Rider M(b)
Billing Load Per Month:				
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor kVarhr Per Month	1,220.1 345,990 76 235,600	251.2 1,031.7 345,990 0 0 76 235,600		
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	244,020 101,970 0 345,990	206,340 139,650 0 345,990	\$29,882 \$11,673 \$0 \$41,555	\$25,268 \$15,986 \$0 \$41,254
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge	e Adjustment	0 0 0		\$0 \$0 \$0
Demand Charge: 0 - 500 kWb 501 - 1500 kWb >1500 kWb Subtotal	500.0 720.1 0.0 1,220.1	500.0 531.7 0.0 1,031.7	\$7,175 \$9,973 \$0 \$17,148	\$7,175 \$7,364 <u>\$0</u> \$14,539
Customer Charge Time-of-Day Metering C Power Factor Adjustmen kVarhr Charge			\$350 \$528 \$0	\$350 \$10 \$502 \$0
Total Base Revenue Pe	r Month		\$59,581	\$56,655
Fuel Oil Adjustment Rate Adjustment (AES I IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0
Total Revenue Per Mon	th		\$59,581	\$56,655
Total Revenue Per Year	r (\$000s)		\$715.0	\$679.9
Rider Adjustment (\$000	s/Yr)		8.	(\$35.1)

#### **ESTIMATE OF TEST YEAR REVENUES**

PR	<b>ESENT</b>	RATES	

			LIGILO
	BILLING <u>UNITS</u>	UNIT PRICE	REVENUES _\$1000S
ENERGY CHARGE:	(MWH)	<u>¢/kWh</u>	
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	797,782 744,994 519,207	12.1534 11.3702 11.0668	\$96,957.6 \$84,707.3 \$ <u>57,459.6</u>
SUBTOTAL	2,061,983		\$239,124.5
DEMAND CHARGE:	<u>(kW)</u>	\$/kW	
0 - 500 KW 501 - 1500 KW > 1500 KW	924,187 899,626 2,339,193	15.11 14.61 13.61	\$13,964.5 \$13,143.5 \$31,836.4
SUBTOTAL	4,163,006		\$58,944.4
Billing Demand Credit	1,698,643	(1.76)	(\$2,989.6)
	BILLS	\$/month	
CUSTOMER CHARGE:	1,946	400.00	\$778.4
ADJUSTMENTS:	(MWH)	<u>¢/kWh</u>	
POWER FACTOR ADJ. SECONDARY METERING ADJ. Schedule E Adjustment	21,511	0.2142	(\$2,980.7) \$46.1 \$ <u>0.0</u>
SUBTOTAL			(\$2,934.6)
UNADJUSTED BASE REVENUE		-	\$292,923.1
RATE RIDER & OTHER REVENUE	ADJ.		
RIDER M (B) RIDER I MULTIPLE RIDERS			(\$1,340.9) (\$165.6) ( <u>\$107.2</u> )
Total Rate Rider & Other Revenue A	djustments		(\$1,613.7)
Total Base Revenue			\$291,309.4
Fuel Oil Adjustment Rate Adjustment (AES Refund)	¢/kWh %	1.986 0.000%	\$40,951.0 \$0.0
TOTAL REVENUE		( <del>-</del>	\$332,260.4

#### **DISTRIBUTION OF SALES & BILLS** BY VOLTAGE SUPPLY SERVICE

RECORDED:	NUMBER OF BILLS	PERCENT OF TOTAL	MWH SALES	PERCENT OF TOTAL	GVARH
PT1 PT2 PP3 PP4 PS5 PS	48 - 1,845 89 190 2,103	1.1 0.0 43.2 2.1 4.4 49.2	176,509 0 2,043,078 20,902 154,413 680,486	5.7 0.0 66.4 0.7 5.0 <u>22.2</u>	24.918397 0.000000 564.711787 5.168016 43.961400 272.886220
TOTAL	4,275	100.0	3,075,389	100.0	911.645820
FORECASTS:	PERCENT OF TOTAL	NUMBER OF BILLS	PERCENT OF TOTAL	MWH SALES	
PT1 PT2 PP3 PP4 PS5 PS	1.1 0.0 43.2 2.1 4.4 49.2	47 1,856 90 189 2,114	5.7 0.0 66.4 0.7 5.0 22.2	175,161 0 2,040,472 21,511 153,650 682,206	
TOTAL	100.0	4,296	100.0	3,073,000	

#### DETERMINATION OF TEST-YEAR BILLING KW BY VOLTAGE SUPPLY SERVICE

	RECORDED		<u>FORECASTS</u>	
TYPE OF CUSTOMERS:	<u>KW</u>	KWH/KW	<u>KW</u>	KWH/KW
PT1 PT2	286,539	616.00	284,352 -	616.00
PP3	4,126,052	495.17	4,120,750	495.17
PP4 PS5	41,061 401,830	509.06 384.28	42,256 399,839	509.06 384.28
PS	1,478,133	460.37	1,481,865	460.37
TOTAL	6,333,615.3	485.57	6,329,062	485.57

#### DETERMINATION OF TEST-YEAR BILLING LOADS FOR SCHEDULE PP CUSTOMERS

	UPPER LIM. OF BLK. AS % OF AVE. USE/BILL	CUM UNIT @ EA. UPPER LIM. AS % OF TOTAL	% UNITS BILLED IN EA. BLOCK	UNITS BILLED IN EA. BLOCK
DEMAND CHARGE:				
0 - 500 KW 501 - 1500 KW > 1500 KW	23.37 70.12	22.20 43.81 100.00	22.20 21.61 56.19	924,187 899,626 2,339,193
TOTAL	198		100.00	4,163,006
ENERGY CHARGE:				
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW		38.69 74.82 100.00	38.69 36.13 25.18	797,782 744,994 519,207
TOTAL			100.00	2,061,983
FORECASTS:				
SALES, MWH BILLS KW KWH/BILL KW/BILL	2,061,983 1,946 4,163,006 1,059,600.72 2,139.26			

# HAWAIIAN ELECTRIC COMPANY, INC. Docket No. 2006-0386, Test-Year 2007 SCHEDULE PP - LARGE POWER PRIMARY VOLTAGE SERVICE DETERMINATION OF POWER FACTOR ADJUSTMENT

	Recorded	Forecast
KWH KVARHR	2,063,980,755 569,879,803	
POWER FACTOR	95.0000 9	
	Present Rates	
CALCULATED PF (%) BASE PF (%)	95.0 85.0	
DIFFERENCE	(10.0)	
ADJ. FOR EA. 1% DIFF.	0.001	
PF ADJUSTMENT RATE	(0.010)	
TOTAL DMD/ENERGY CHR.	\$298,068.9	
POWER FACTOR ADJ.	(\$2,980.7)	

#### **ESTIMATE OF TEST YEAR REVENUES**

# PRESENT RATES

			O ARRAD PRODUCTION OF THE STATE OF
	BILLING <u>UNITS</u>	UNIT PRICE	REVENUES \$1000S
ENERGY CHARGE:	(MWH)	<u>¢/kWh</u>	
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	797,782 744,994 519,207	12.1534 11.3702 11.0668	\$96,957.6 \$84,707.3 \$ <u>57,459.6</u>
SUBTOTAL	2,061,983		\$239,124.5
DEMAND CHARGE:	(kW)	\$/kW	
0 - 500 KW 501 - 1500 KW > 1500 KW	924,187 899,626 2,339,193	15.11 14.61 13.61	\$13,964.5 \$13,143.5 \$31,836.4
SUBTOTAL	4,163,006		\$58,944.4
Billing Demand Credit	1,698,643	-1.76	(\$2,989.6)
	BILLS	\$/month	
CUSTOMER CHARGE:	1,946	400.00	\$778.4
ADJUSTMENTS:	(MWH)	<u>¢/kWh</u>	
MISCELLANEOUS ** Fuel Oil Adjustment Rate Adjustment (AES Refund)	¢/kWh %	1.986 0.000%	(\$4,548.3) \$40,951.0 \$0.0
TOTAL REVENUE		<u>;</u>	\$332,260.4

# SUMMARY OF TEST-YEAR REVENUES ADJUSTMENTS FOR RIDER SERVICE

RIDER M(B)	PRESENT (\$1000s)
Rider Mb PP1	(\$19.6)
Rider Mb PP2	(\$0.6)
Rider Mb PP3	(\$5.0)
Rider Mb PP4	(\$890.9)
Rider Mb PP5	(\$100.5)
Rider Mb PP6	(\$50.5)
Rider Mb PP7	(\$136.8)
Rider Mb PP8	( <u>\$137.0</u> )
TOTAL	(\$1,340.9)
	PRESENT
RIDER I	<u>(\$1000s)</u>
Rider I PP1	(\$45.6)
Rider I PP2	(\$120.0)
TOTAL	(\$165.6)
1017.2	(ψ.σσ.σ)
	PRESENT
MULTIPLE RIDERS	(\$1000s)
RiderMult PP1	(\$1.9)
RiderMult PP2	( <u>\$105.3</u> )
TOTAL	(\$107.2)

# Rider I PP1

	Billing U	<u>Inits</u>	Revenues @ Present Rates	
	Sch. PP3	Rider I	Sch. PP3	Rider I
Billing Load Per Month:				
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor kVarhr Per Month	1,257.0 760,100 94 284,100	1,036.8 760,100 0 0 94 284,100		
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	251,400 251,400 257,300 760,100	207,360 207,360 345,380 760,100	\$30,554 \$28,585 \$28,475 \$87,614	\$25,201 \$23,577 \$38,223 \$87,001
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		0 0 0		\$0 \$0 \$0
Demand Charge: 0 - 500 kWb 501 - 1500 kWb >1500 kWb Subtotal	500.0 757.0 0.0 1,257.0	500.0 536.8 0.0 1,036.8	\$7,555 \$11,060 <u>\$0</u> \$18,615	\$7,555 \$7,843 \$0 \$15,398
Customer Charge Time-of-Day Metering C Power Factor Adjustme kVarhr Charge			\$400 (\$956) \$0	\$400 (\$922) \$0
Total Base Revenue Pe	er Month		\$105,673	\$101,877
Fuel Oil Adjustment Rate Adjustment (AES I IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0
Total Revenue Per Mor	nth		\$105,673	\$101,877
Total Revenue Per Yea	r (\$000s)		\$1,268.1	\$1,222.5
Rider Adjustment (\$000	)s/Yr)			(\$45.6)

# Rider I PP2

	Billing U	<u>Jnits</u>	Revenues @ Present Rates	
	Sch. PP3	Rider I	Sch. PP3	Rider I
Billing Load Per Month:				
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor kVarhr Per Month	2,332.3 912,600 86 704,250	1,717.7 912,600 0 0 86 704,250		
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	466,460 446,140 0 912,600	343,540 343,540 225,520 912,600	\$56,691 \$50,727 \$0 \$107,418	\$41,752 \$39,061 \$24,958 \$105,771
On-Peak Surcharge Off-Peak Credit Rider T Energy Charg		0 0 0		\$0 \$0 \$0
Demand Charge: 0 - 500 kWb 501 - 1500 kWb >1500 kWb Subtotal	500.0 1,000.0 832.3 2,332.3	500.0 1,000.0 217.7 1,717.7	\$7,555 \$14,610 \$11,328 \$33,493	\$7,555 \$14,610 \$2,963 \$25,128
Customer Charge Time-of-Day Metering ( Power Factor Adjustme kVarhr Charge			\$400 (\$141) \$0	\$400 (\$131) \$0
Total Base Revenue Pe	er Month		\$141,170	\$131,168
Fuel Oil Adjustment Rate Adjustment (AES Refund) IRP Adjustment DSM Adjustment			\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0
Total Revenue Per Mor	nth		\$141,170	\$131,168
Total Revenue Per Yea	ar (\$000s)		\$1,694.0	\$1,574.0
Rider Adjustment (\$000	Os/Yr)			(\$120.0)

# RiderMult PP1

	Billing	<u>Units</u>	Revenues @ Present Rates	
	Sch. PP3	Rider M(a&b)	Sch. PP3	Rider M(a&b)
Billing Load Per Month:				
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor kVarhr Per Month	395.7 134,662 96 72,236	385.1 134,662 0 0 96 72,236		
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	79,140 55,522 0 134,662	77,020 57,642 0 134,662	\$9,618 \$6,313 \$0 \$15,931	\$9,361 \$6,554 \$0 \$15,915
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge	Adjustment	0 0 0		\$0 \$0 \$0
Demand Charge: 0 - 500 kWb 501 - 1500 kWb >1500 kWb Subtotal	395.7 0.0 0.0 395.7	385.1 0.0 0.0 385.1	\$5,979 \$0 \$0 \$5,979	\$5,819 \$0 \$0 \$5,819
Customer Charge Time-of-Day Metering C Power Factor Adjustment kVarhr Charge			\$400 (\$241) \$0_	\$400 \$10 (\$239) \$0
Total Base Revenue Pe	r Month		\$22,069	\$21,905
Fuel Oil Adjustment Rate Adjustment (AES I IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0
Total Revenue Per Mon	th		\$22,069	\$21,905
Total Revenue Per Yea	r (\$000s)		\$264.8	\$262.9
Rider Adjustment (\$000	s/Yr)		32	(\$1.9)

# RiderMult PP2

	Billing	<u>Units</u>	Revenues @ Present Rates	
	Sch. PP3	Riders M(b)&I	Sch. PP3	Riders M(b)&I
Billing Load Per Month:				
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor kVarhr Per Month	2,011.1 1,187,550 90 593,100	1,474.0 1,187,550 0 0 90 593,100		
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	402,220 402,220 383,110 1,187,550	294,800 294,800 597,950 1,187,550	\$48,883 \$45,733 \$42,398 \$137,014	\$35,828 \$33,519 \$66,174 \$135,521
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		0 0		\$0 \$0 \$0
Demand Charge: 0 - 500 kWb 501 - 1500 kWb >1500 kWb Subtotal	500.0 1,000.0 511.1 2,011.1	500.0 974.0 0.0 1,474.0	\$7,555 \$14,610 \$6,956 \$29,121	\$7,555 \$14,230 <u>\$0</u> \$21,785
Customer Charge Time-of-Day Metering C Power Factor Adjustme kVarhr Charge			\$400 (\$831) \$0_	\$400 \$10 (\$787) \$0
Total Base Revenue Pe	r Month		\$165,704	\$156,929
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0
Total Revenue Per Mon	th		\$165,704	\$156,929
Total Revenue Per Yea	r (\$000s)		\$1,988.4	\$1,883.1
Rider Adjustment (\$000	s/Yr)			(\$105.3)

	Billing	<u>Units</u>	Revenues @ P	resent Rates
	Sch. PP3	Rider M(b)	Sch. PP3	Rider M(b)
Billing Load Per Month:				
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor kVarhr Per Month	854.0 396,133 87 128,000	126.0 759.5 396,133 0 0 87 128,000		
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	170,800 170,800 54,533 396,133	151,900 151,900 92,333 396,133	\$20,758 \$19,420 \$6,035 \$46,213	\$18,461 \$17,271 \$10,218 \$45,950
On-Peak Surcharge Off-Peak Credit Rider T Energy Charg		0 		\$0 \$0 \$0
Demand Charge: 0 - 500 kWb 501 - 1500 kWb >1500 kWb Subtotal	500.0 354.0 0.0 854.0	500.0 259.5 0.0 759.5	\$7,555 \$5,172 <u>\$0</u> \$12,727	\$7,555 \$3,791 \$0 \$11,346
Customer Charge Time-of-Day Metering ( Power Factor Adjustme kVarhr Charge			\$400 (\$118) \$0	\$400 \$10 (\$115) \$0
Total Base Revenue Pe	er Month		\$59,222	\$57,591
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0
Total Revenue Per Mo	nth		\$59,222	\$57,591
Total Revenue Per Yea	ar (\$000s)		\$710.7	\$691.1
Rider Adjustment (\$000	0s/Yr)	ŧ		(\$19.6)

	Billing Units		Revenues @ P	Revenues @ Present Rates	
	Sch. PP3	Rider M(b)	Sch. PP3	Rider M(b)	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor kVarhr Per Month	793.5 474,100 98 92,450	4.8 789.9 474,100 0 0 98 92,450			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	158,700 158,700 156,700 474,100	157,980 157,980 158,140 474,100	\$19,287 \$18,045 \$17,342 \$54,674	\$19,200 \$17,963 \$17,501 \$54,664	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		0 0		\$0 \$0 \$0	
Demand Charge: 0 - 500 kWb 501 - 1500 kWb >1500 kWb Subtotal	500.0 293.5 0.0 793.5	500.0 289.9 0.0 789.9	\$7,555 \$4,288 <u>\$0</u> \$11,843	\$7,555 \$4,235 \$0 \$11,790	
Customer Charge Time-of-Day Metering Charge Power Factor Adjustment kVarhr Charge			\$400 (\$865) 	\$400 \$10 (\$864) \$0	
Total Base Revenue Per Month			\$66,052	\$66,000	
Fuel Oil Adjustment Rate Adjustment (AES Refund) IRP Adjustment DSM Adjustment			\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Month			\$66,052	\$66,000	
Total Revenue Per Year (\$000s)			\$792.6	\$792.0	
Rider Adjustment (\$000s/Yr)				(\$0.6)	

	Billing Units		Revenues @ P	Revenues @ Present Rates	
	Sch. PP3	Rider M(b)	Sch. PP3	Rider M(b)	
Billing Load Per Month:					
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor kVarhr Per Month	337.1 179,583 97 46,750	32.3 312.9 179,583 0 0 97 46,750			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	67,420 67,420 44,743 179,583	62,580 62,580 54,423 179,583	\$8,194 \$7,666 \$4,952 \$20,812	\$7,606 \$7,115 \$6,023 \$20,744	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge Adjustment		0 		\$0 \$0 \$0	
Demand Charge: 0 - 500 kWb 501 - 1500 kWb >1500 kWb Subtotal	337.1 0.0 0.0 337.1	312.9 0.0 0.0 312.9	\$5,094 \$0 \$0 \$5,094	\$4,728 \$0 \$0 \$4,728	
Customer Charge Time-of-Day Metering C Power Factor Adjustmen kVarhr Charge			\$400 (\$311) 	\$400 \$10 (\$306) \$0	
Total Base Revenue Pe	r Month		\$25,995	\$25,576	
Fuel Oil Adjustment Rate Adjustment (AES I IRP Adjustment DSM Adjustment		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0		
Total Revenue Per Mon	th		\$25,995	\$25,576	
Total Revenue Per Yea	r (\$000s)		\$311.9	\$306.9	
Rider Adjustment (\$000			(\$5.0)		

	Billing Units		Revenues @ P	Revenues @ Present Rates	
	Sch. PP3	Rider M(b)	Sch. PP3	Rider M(b)	
Billing Load Per Month:	0=				
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor kVarhr Per Month	57,399.0 31,902,000 98 7,406,000	6,120.0 52,809.0 31,902,000 0 0 98 7,406,000			
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	11,479,800 11,479,800 8,942,400 31,902,000	10,561,800 10,561,800 10,778,400 31,902,000	\$1,395,186 \$1,305,276 \$989,638 \$3,690,100	\$1,283,618 \$1,200,898 \$1,192,824 \$3,677,340	
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge Adjustment		0 0		\$0 \$0 \$0	
Demand Charge: 0 - 500 kWb 501 - 1500 kWb >1500 kWb Subtotal	500.0 1,000.0 55,899.0 57,399.0	500.0 1,000.0 51,309.0 52,809.0	\$7,555 \$14,610 \$760,785 \$782,950	\$7,555 \$14,610 \$698,315 \$720,480	
Customer Charge Time-of-Day Metering Charge Power Factor Adjustment kVarhr Charge			\$400 (\$58,150) 	\$400 \$10 (\$57,172) \$0	
Total Base Revenue Per Month			\$4,415,300	\$4,341,058	
Fuel Oil Adjustment Rate Adjustment (AES Refund) IRP Adjustment DSM Adjustment			\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	
Total Revenue Per Month			\$4,415,300	\$4,341,058	
Total Revenue Per Year (\$000s)			\$52,983.6	\$52,092.7	
Rider Adjustment (\$000s/Yr)				(\$890.9)	

	Billing	Billing Units		resent Rates
	Sch. PP3	Rider M(b)	Sch. PP3	Rider M(b)
Billing Load Per Month:				9
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor kVarhr Per Month	2,360.7 756,000 97 376,600	737.0 1,807.9 756,000 0 0 97 376,600		
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	472,140 283,860 0 756,000	361,580 361,580 32,840 756,000	\$57,381 \$32,275 \$0 \$89,656	\$43,944 \$41,112 \$3,634 \$88,690
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		0 0		\$0 \$0 \$0
Demand Charge: 0 - 500 kWb 501 - 1500 kWb >1500 kWb Subtotal	500.0 1,000.0 860.7 2,360.7	500.0 1,000.0 307.9 1,807.9	\$7,555 \$14,610 \$11,714 \$33,879	\$7,555 \$14,610 \$4,191 \$26,356
Customer Charge Time-of-Day Metering C Power Factor Adjustmen kVarhr Charge			\$400 (\$1,482) \$0	\$400 \$10 (\$1,381) \$0
Total Base Revenue Pe	r Month		\$122,453	\$114,075
Fuel Oil Adjustment Rate Adjustment (AES I IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0
Total Revenue Per Mon	th		\$122,453	\$114,075
Total Revenue Per Year	r (\$000s)		\$1,469.4	\$1,368.9
Rider Adjustment (\$000	s/Yr)			(\$100.5)

	Billing	<u>Units</u>	Revenues @ P	resent Rates
	Sch. PP3	Rider M(b)	Sch. PP3	Rider M(b)
Billing Load Per Month:				
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor kVarhr Per Month	1,411.8 755,800 90 367,400	325.2 1,167.9 755,800 0 0 90 367,400		
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	282,360 282,360 191,080 755,800	233,580 233,580 288,640 755,800	\$34,316 \$32,105 \$21,146 \$87,567	\$28,388 \$26,559 \$31,943 \$86,890
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		0 0		\$0 \$0 \$0
Demand Charge: 0 - 500 kWb 501 - 1500 kWb >1500 kWb Subtotal	500.0 911.8 0.0 1,411.8	500.0 667.9 0.0 1,167.9	\$7,555 \$13,321 \$0 \$20,876	\$7,555 \$9,758 \$0 \$17,313
Customer Charge Time-of-Day Metering C Power Factor Adjustme kVarhr Charge			\$400 (\$542) \$0	\$400 \$10 (\$521) 
Total Base Revenue Pe	er Month		\$108,301	\$104,092
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0
Total Revenue Per Mor	nth		\$108,301	\$104,092
Total Revenue Per Yea	ar (\$000s)		\$1,299.6	\$1,249.1
Rider Adjustment (\$000	Os/Yr)			(\$50.5)

	Billing	Billing Units		resent Rates
	Sch. PP3	Rider M(b)	Sch. PP3	Rider M(b)
Billing Load Per Month:				
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor kVarhr Per Month	4,114.7 1,972,800 96 96,550	939.0 3,410.4 1,972,800 0 0 96 96,550		
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	822,940 822,940 326,920 1,972,800	682,080 682,080 608,640 1,972,800	\$100,015 \$93,570 \$36,180 \$229,765	\$82,896 \$77,554 \$67,357 \$227,807
On-Peak Surcharge Off-Peak Credit Rider T Energy Charg		0 0 0		\$0 \$0 \$0
Demand Charge: 0 - 500 kWb 501 - 1500 kWb >1500 kWb Subtotal	500.0 1,000.0 2,614.7 4,114.7	500.0 1,000.0 1,910.4 3,410.4	\$7,555 \$14,610 \$35,586 \$57,751	\$7,555 \$14,610 \$26,001 \$48,166
Customer Charge Time-of-Day Metering ( Power Factor Adjustme kVarhr Charge			\$400 (\$3,163) \$0_	\$400 \$10 (\$3,036) \$0
Total Base Revenue Pe	er Month		\$284,753	\$273,347
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0
Total Revenue Per Mo	nth		\$284,753	\$273,347
Total Revenue Per Yea	ar (\$000s)		\$3,417.0	\$3,280.2
Rider Adjustment (\$000	0s/Yr)			(\$136.8)

	Billing	<u>Units</u>	Revenues @ P	resent Rates
	Sch. PP3	Rider M(b)	Sch. PP3	Rider M(b)
Billing Load Per Month:				
Curtailable Load Billing kW kWh Per Month On-Peak kWh Off-Peak kWh Power Factor kVarhr Per Month	5,625.6 3,254,400 99 140,600	943.2 4,918.2 3,254,400 0 0 99 140,600		
Energy Charge: 0 - 200 kWh/kW 201 - 400 kWh/kW >400 kWh/kW Subtotal	1,125,120 1,125,120 1,004,160 3,254,400	983,640 983,640 1,287,120 3,254,400	\$136,740 \$127,928 \$111,128 \$375,796	\$119,546 \$111,842 \$142,443 \$373,831
On-Peak Surcharge Off-Peak Credit Rider T Energy Charge		0 0		\$0 \$0 \$0
Demand Charge: 0 - 500 kWb 501 - 1500 kWb >1500 kWb Subtotal	500.0 1,000.0 4,125.6 5,625.6	500.0 1,000.0 3,418.2 4,918.2	\$7,555 \$14,610 \$56,149 \$78,314	\$7,555 \$14,610 \$46,522 \$68,687
Customer Charge Time-of-Day Metering C Power Factor Adjustme kVarhr Charge			\$400 (\$6,358) \$0	\$400 \$10 (\$6,195) \$0
Total Base Revenue Pe	er Month		\$448,152	\$436,733
Fuel Oil Adjustment Rate Adjustment (AES IRP Adjustment DSM Adjustment	Refund)		\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0
Total Revenue Per Mor	nth		\$448,152	\$436,733
Total Revenue Per Yea	ır (\$000s)		\$5,377.8	\$5,240.8
Rider Adjustment (\$000	)s/Yr)			(\$137.0)

### **ESTIMATE OF TEST-YEAR REVENUES**

	₹E:			ΑT	

	BILLING <u>UNITS</u>	UNIT PRICE	REVENUES \$1000S	
ENERGY CHARGE:	(MWH)	¢/kWH		
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	55,137 52,510 67,514	11.6037 10.8318 10.5326	\$6,397.9 \$5,687.8 \$ <u>7,111.0</u>	
SUBTOTAL	175,161		\$19,196.7	
DEMAND CHARGE:	<u>(kW)</u>	<u>\$/kW</u>		
0 - 500 KW 501 - 1500 KW > 1500 KW	22,748 39,496 222,107	14.00 13.50 12.50	\$318.5 \$533.2 \$ <u>2,776.3</u>	
SUBTOTAL	284,351		\$3,628.0	
	<b>BILLS</b>	\$/month		
CUSTOMER CHARGE:	47	400.00	\$18.8	
ADJUSTMENTS:				
POWER FACTOR ADJ. SECONDARY METERING ADJ. Schedule E Adjustment			(\$319.5) \$0.0 \$0.0	
SUBTOTAL		an 12	(\$319.5)	
UNADJUSTED BASE REVENUE			\$22,524.0	
Fuel Oil Adjustment Rate Adjustment (AES Refund):	¢/kWH %	1.986 0.000%	\$3,478.7 \$0.0	
UNADJUSTED TOTAL REVENUE			\$26,002.7	
RATE RIDER & OTHER REVENUE A	DJ.			
RIDER M (B) RIDER I RIDER T MULTIPLE RIDERS RIDER EDR SCHEDULE CHP		,	\$0.0 \$0.0 \$0.0 \$0.0 \$0.0 \$0.0	
Total Rate Rider & Other Revenue Ad	justments	\$ <del>-</del>	\$0.0	
TOTAL REVENUES			\$26,002.7	

### DISTRIBUTION OF SALES & BILLS BY VOLTAGE SUPPLY SERVICE

RECORDED:	NUMBER OF BILLS	PERCENT OF TOTAL	MWH SALES	PERCENT OF TOTAL	<u>GVARH</u>
PT1 PT2 PP3 PP4 PS5 PS	48 1,845 89 190 2,103	1.1 0.0 43.2 2.1 4.4 49.2	176,509 0 2,043,078 20,902 154,413 680,486	5.7 0.0 66.4 0.7 5.0 <u>22.2</u>	24.918397 0.000000 564.711787 5.168016 43.961400 272.886220
TOTAL	4,275	100.0	3,075,389	100.0	911.645820
FORECASTS:	PERCENT OF TOTAL	NUMBER OF BILLS	PERCENT OF TOTAL	MWH SALES	
PT1 PT2 PP3 PP4 PS5 PS	1.1 0.0 43.2 2.1 4.4 49.2	47 - 1,856 90 189 2,114	5.7 0.0 66.4 0.7 5.0 22.2	175,161 0 2,040,472 21,511 153,650 682,206	
TOTAL	100.0	4,296	100.0	3,073,000	

### DETERMINATION OF TEST-YEAR BILLING KW BY VOLTAGE SUPPLY SERVICE

	RECORDED		<u>FORECASTS</u>	
TYPE OF CUSTOMERS:	<u>KW</u>	KWH/KW	<u>KW</u>	KWH/KW
PT1	286,539	616.00	284,352	616.00
PT2	<u> </u>	<u>설</u> 편		· <del></del>
PP3	4,126,052	495.17	4,120,750	495.17
PP4	41,061	509.06	42,256	509.06
PS5	401,830	384.28	399,839	384.28
PS	1,478,133	460.37	1,481,865	460.37
TOTAL	6,333,615.3	485.57	6,329,062	485.57

### DETERMINATION OF TEST-YEAR BILLING LOADS FOR SCHEDULE PT1 CUSTOMERS

	RECORDED		FORE	<u>CASTS</u>
	<u>MWH</u>	% OF TOTAL	<u>MWH</u>	% OF TOTAL
SALES, MWH				
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	2,222.1 19,560.7 154,726.2	1.26 11.08 <u>87.66</u>	2,207 19,408 153,546	1.26 11.08 <u>87.66</u>
TOTAL	176,509.0	100.00	175,161	100.00
KW BILLED	KW	KWH/KW	KW	
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	19,836.3 49,960.8 216,742.1	112.02 391.52 713.87	19,702 49,571 215,079	
TOTAL	286,539.2	616.00	284,352	

### DETERMINATION OF TEST-YEAR BILLING LOADS FOR SCHEDULE PT1 CUSTOMERS

### LOAD FACTOR BLOCKS (KWH/KW)

	0 -200	<u> 201 - 400</u>	<u>&gt; 400</u>	TOTAL
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	2,207 - -	9,914 9,494 	43,016 43,016 67,514	55,137 52,510 67,514
SUBTOTAL	2,207	19,408	153,546	175,161
FORECASTS:				
SALES, MWH KW	2,207 19,702	19,408 49,571	153,546 215,079	175,161 284,352

### DETERMINATION OF TEST-YEAR BILLING LOADS FOR SCHEDULE PT1 CUSTOMERS

	UPPER LIM. OF BLK. AS % OF AVE. USE/BILL	CUM UNIT @ EA. UPPER LIM. AS % OF TOTAL	% UNITS BILLED IN EA. BLOCK	UNITS BILLED IN <u>EA. BLOCK</u>
DEMAND CHARGE:				
0 - 500 KW 501 - 1500 KW > 1500 KW	8.26 24.79	8.00 21.89 100.0	8.00 13.89 78.11	22,748 39,496 222,107
TOTAL			100.00	284,352
ENERGY CHARGE:				
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW				55,137 52,510 67,514
TOTAL				175,161
FORECASTS:				
SALES, MWH BILLS KW KWH/BILL KW/BILL	175,161 47 284,352 3,726,830 6,050			

## HAWAIIAN ELECTRIC COMPANY, INC. Docket No. 2006-0386, Test-Year 2007 SCHEDULE PT - LARGE POWER TRANSMISSION VOLTAGE SERVICE

### DETERMINATION OF POWER FACTOR ADJUSTMENT

	Recorded	Forecast
KWH KVARHR	176508964 24918397	
POWER FACTOR	99.0182	99.0182
	Present Rates	
CALCULATED PF (%) BASE PF (%)	99 85	
DIFFERENCE	(14.0)	
ADJ. FOR EA. 1% DIFF.	0.001	
PF ADJUSTMENT RATE	(0.014)	
TOTAL DMD/ENERGY CHARGES	\$22,824.7	
POWER FACTOR ADJ.	(\$319.5)	

### **ESTIMATE OF TEST-YEAR REVENUES**

### PRESENT RATES

	BILLING <u>UNITS</u>	UNIT PRICE	REVENUES _ <u>\$1000S</u>
ENERGY CHARGE:	<u>(MWH)</u>	<u>¢/kWH</u>	
0 - 200 KWH/KW 201 - 400 KWH/KW > 400 KWH/KW	55,137 52,510 67,514	11.6037 10.8318 10.5326	\$6,397.9 \$5,687.8 \$ <u>7,111.0</u>
SUBTOTAL	175,161		\$19,196.7
DEMAND CHARGE:	(kW)	<u>\$/kW</u>	
0 - 500 KW 501 - 1500 KW > 1500 KW	22,748 39,496 222,107	14.00 13.50 12.50	\$318.5 \$533.2 \$ <u>2,776.3</u>
SUBTOTAL	284,351		\$3,628.0
	<u>BILLS</u>	\$/month	
CUSTOMER CHARGE:	47	400.00	\$18.8
ADJUSTMENTS:			
MISCELLANEOUS ** Fuel Oil Adjustment Rate Adjustment (AES Refund):	¢/kWH %	1.986 0.000%_	(\$319.5) \$3,478.7 \$0.0
TOTAL REVENUES			\$26,002.7

### **ESTIMATE OF TEST-YEAR REVENUES**

		PRESENT RATES		
	BILLING <u>UNITS</u>	UNIT PRICE	REVENUES _\$1000S	
CUSTOMER CHARGE:	<u>Bills</u>	\$/month		
Customers	5,244	20.00	\$104.9	
ENERGY CHARGE:	<u>MWH</u>	<u>¢/kWh</u>		
0 - 150 KWH/KW > 150 KWH/KW	17,464 20,336	18.6161 14.6421	\$3,251.1 \$2,977.6	
SUBTOTAL	37,800	-	\$6,228.7	
ADJUSTMENTS:				
MINIMUM BILL SCHEDULE E ADJUSTMEN SECONDARY METERING AI			\$0.3 \$0.0 \$16.1	
SUBTOTAL			\$16.4	
UNADJUSTED BASE REVEN	UE:		\$6,350.0	
FUEL OIL ADJUSTMENT: RATE ADJUSTMENT (AES RI	EFUND):	1.986 ¢/kWh 0.000 (%)	\$750.7 \$0.0	
UNADJUSTED TOTAL REVE	NUE		\$7,100.7	

\$0.0

\$7,100.7

RIDER ADJUSTMENTS

**TOTAL REVENUES** 

### DETERMINATION OF TEST-YEAR BILLING LOADS

TOTAL F	RECORDED	<u>FORECASTS</u>
SALES, MWH	33,339.6	37,800
BILLED KW	107,888.3	122,322
KWH/KW	309.02	309.02
NUMBER OF BILLS	4,848	5,244
SECONDARY METERING	(with % surcharge)	
SALES, MWH	5,754.4	6,539
% OF TOTAL	17.3	17.3
BILLED KW	17,431.3	19,808
KWH/KW	330.12	330.12
NUMBER OF BILLS	930	1,007
% OF TOTAL	19.2	19.2

### **DETERMINATION OF TEST-YEAR BILLING LOADS**

BILLING BLOCKS:	CUM AT EA. UPPER LIMIT AS % OF TOTAL	PERCENT OF UNITS BILLED IN EACH BLOCK	MWH BILLED IN EACH BLOCK
0 - 150 KWH/KW	46.2	46.2	17,464
> 150 KWH/KW	100.0	53.8	20,336
TOTAL		100.0	37,800
SECONDARY METERING:			
0 - 150 KWH/KW	43.9	43.9	2,871
> 150 KWH/KW	100.0	56.1	3,668
TOTAL		100.0	6,539

### DETERMINATION OF TEST-YEAR BILLING LOADS FOR MINIMUM CHARGE PROVISION

PRESENT
RATES

MIN CHRG less Cust CHRG.,\$/MO. 15.00
BASE ENERGY ,\$/KWH 0.186161
F.O.A., \$/KWH 0.01986
MINIMUM KWH/MO. 72.81

### PRESENT RATES

	RECORDED	FORECAST
SALES, MWH		
TOTAL F LT/EQ TO MIN. KWH % OF TOTAL	33,340 0.139 0.000	37,800 - 0.000
NUMBER OF BILLS		
TOTAL F LT/EQ TO MIN. KWH % OF TOTAL	4,848 8 0.165	5,244 9 0.165

### ESTIMATE OF TEST-YEAR REVENUE ADJUSTMENTS FOR MINIMUM CHARGE PROVISION

### PRESENT RATES

	UNITS BILLED	UNIT PRICE	REVENUES \$1000S
IF NO PROVISION FOR MINIMUM CHRG.:	<u>(MWH)</u>	<u>¢/kWh</u>	
BASE ENERGY CHARGE FUEL OIL ADJUSTMENT:	0.0 0.0	18.6161 1.986	\$0.0 <u>\$0.0</u>
TOTAL, IF NO MIN CHRG.			\$0.0
	BILLS	\$/Month	
AS BILLED WITH MINIMUM CHARGE:	9	35.00	<u>\$0.3</u>
MINIMUM BILL ADJ.:			\$0.3

### ESTIMATES OF TEST-YEAR REVENUE ADJUSTMENTS FOR SECONDARY METERING

		PRESENT	RATES
ENERGY REVENUES	UNITS BILLED (MWH)	UNIT PRICE CENTS/KWH	REVENUES \$1000S
ENERGY CHARGE:			
0 - 150 KWH/KW > 150 KWH/KW	2,871 <u>3,668</u>	18.6161 14.6421	\$534.5 <u>\$537.1</u>
SUBTOTAL	6,539		\$1,071.6
TOTAL ENERGY REVENUES		s <del></del>	\$1,071.6
SEC. METERING % ADJUSTMENT:		1.5%	\$16.1

### **ESTIMATE OF TEST-YEAR REVENUES**

### PRESENT RATES

ž.	BILLING <u>UNITS</u>	UNIT PRICE	REVENUES \$1000S
CUSTOMER CHARGE:	Bills	\$/month	
Customers	5,244	20.00	\$104.9
ENERGY CHARGE:	<u>MWH</u>	<u>¢/kWh</u>	
0 - 150 KWH/KW > 150 KWH/KW	17,464 20,336	18.6161 14.6421	\$3,251.1 \$2,977.6
SUBTOTAL	37,800	-	\$6,228.7
ADJUSTMENTS:			
MISCELLANEOUS ** FUEL OIL ADJUSTMENT: RATE ADJUSTMENT (AES RE	FUND):	1.986 ¢/kWh 0.000 (%)	\$16.4 \$750.7 \$0.0
TOTAL REVENUES			\$7,100.7

## Hawaiian Electric Company, Inc. Comparison of Energy Cost Adjustment Factors

### 2007 Test Year - Adjustment for D&O No. 23768 - TY05 Rate Case

(¢/kwh)

Present Rates					
Adjustment for D&O No. 23768 - TY05 Rate Case ( A )	Settlement (B)	June 2007 Update ( C )	Direct Testimony ( D )	Difference (A)-(B)	Difference (B)-(C)
1.986	7.340	7.331	7.299	-5.354	0.009

Proposed Rates				
Adjustment				
for D&O No.				
23768 -				
TY05 Rate		June 2007	Direct	
Case	Settlement	Update	Testimony	
0.000	0.000	0.000	0.000	

## HAWAIIAN ELECTRIC COMPANY, INC. Comparison of Composite Cost of Generation - Central Station and DG

### 2007 Test Year - Adjustment for D&O No. 23768 - TY05 Rate Case

### At Present Rates

		(A)	(B)	(C)	(D)
		Adjustment for D&O No. 23768 - TY05 Rate Case	Settlement and June 2007 Update	Direct Testimony	Difference (A)-(B)
Line		E. J. V. SHADA W1.		CONTRACTOR	0 <del>-1</del> 0 2
CENT	RAL STATION				
	FUEL PRICES, ¢/mmbtu				
1	Kahe	1,055.65	1,055.65	1,050.17	0.00
	Waiau	1,055.65	1,055.65	1,050.17	0.00
22.	Honolulu	1,105.93	1,055.65	1,050.17	50.28
4	Diesel	1,707.34	1,707.34	1,698.53	0.00
5	DG		0.00	0.00	0.00
	BTU MIX, %		ř		
6	Kahe	70.31	70.01	69.65	0.30
7	Waiau	25.25	25.14	25.10	0.11
8	to contract the contract of th	3.58	3.56	3.62	0.02
	Diesel	0.86	0.85	1.17	0.01
10	DG		0.44	0.46	-0.44
		100.00	100.00	100.00	0.00
11	COMPOSITE COST OF				
	GENERATION - CENT	RAL			
	STATION ¢/mmbtu	1,063.05	1,056.54	1,052.93	6.51
DG	120 0000 - 10 - 10 - 10 - 10				
200	FUEL PRICE, ¢/kwh				
12			799000444	S 38450	\$200 SAR
	DG ENERGY ¢/kwh	18.204	N/A	N/A	18.204

#### Source:

Col (A): D&O No. 23768 - HECO TY05 Rate Case

Col (B): Settlement and June 2007 Update HECO-WP-934, p. 3.

Col (C): Direct Testimony HECO-WP-934, p. 3.

## HAWAIIAN ELECTRIC COMPANY, INC. Comparison of Composite Cost of Generation - Central Station and DG

### 2007 Test Year - Adjustment for D&O 23768 - TY05 Rate Case

### At Proposed Rates

		(A) Adjustment for D&O 23768 - TY05 Rate Case, Settlement and	(B)	(C)
		June 2007	Direct	Difference
		Update	Testimony	(A)-(B)
_Line				
CENT	RAL STATION			
	FUEL PRICES, ¢/mmbtu		1 5-5 15	- 15
	Kahe	1,055.97	1,050.49	5.48
	Waiau	1,055.65	1,050.17	5.48
	Honolulu	1,105.93	1,100.18	5.75
	Diesel	1,707.34	1,698.53	8.81
5	Other	0.00	0.00	0.00
	BTU MIX, %			
6	Kahe	70.31	69.97	0.34
7	Waiau	25.25	25.22	0.03
8	Honolulu	3.58	3.63	-0.05
9	Diesel	0.86	1.18	-0.32
10	Other	0.00	0.00	0.00
		100.00	100.00	0.00
11	COMPOSITE COST OF GENERATION - CENT	RAL		2963
	STATION ¢/mmbtu	1,063.28	1,059.86	3.42
				1
no ne				
<u>DG</u>				
	FUEL PRICE, ¢/kwh			
12	COMPOSITE COST OF			
	DG ENERGY ¢/kwh	18.204	18.114	0.090

#### Source:

Col ( A ): D&O No. 23768 - HECO TY05 Rate Case, Settlement and June 2007 Update HECO-WP-936, p. 2 and p. 5.

Col (B): Direct Testimony HECO-WP-936, p. 2 and p. 5.

## HAWAIIAN ELECTRIC COMPANY, INC. Comparison of Composite Cost of Purchased Energy

### 2007 Test Year - Adjustment for D&O 23768 - TY05 Rate Case

### At Present and Proposed Rates

		(A) Adjustment for D&O 23768	(B)	(C)	(D)	(E)
		and	June 2007	Direct	Difference	Difference
		Settlement	Update	Testimony	(A)-(B)	(B)-(C)
<u>Line</u>						
	PAYMENT RATE, ¢/kwh					
1	Kalaeloa	9.920	9.920	9.919	0.000	0.001
2	AES	2.730	2.690	2.671	0.040	0.019
3	HPower - On Peak	12.782	12.782	12.753	0.000	0.029
4	HPower - Off Peak	9.710	9.710	9.688	0.000	0.022
5	HPower - On Peak-excess	0.000	0.000	0.000	0.000	0.000
6	HPower - Off Peak-excess	9.710	9.710	9.687	0.000	0.023
7	Tesoro - On Peak	14.640	14.640	14.600	0.000	0.040
8	Tesoro - Off Peak	11.080	11.080	11.050	0.000	0.030
9	Chevron - On Peak	14.640	14.640	14.600	0.000	0.040
10	Chevron - Off Peak	11.080	11,080	11.050	0.000	0.030
	KWH MIX, %					
11	Kalaeloa	44.17	44.17	44.16	0.00	0.01
12	AES	45.65	45.65	45.65	0.00	0.00
13	HPower - On Peak	5.83	5.83	5.84	0.00	-0.01
14	HPower - Off Peak	2.69	2.69	2.69	0.00	0.00
15	HPower - On Peak-excess	0.00	0.00	0.00	0.00	0.00
16	HPower - Off Peak-excess	1.48	1.48	1.48	0.00	0.00
17	Tesoro - On Peak	0.09	0.09	0.09	0.00	0.00
18	Tesoro - Off Peak	0.07	0.07	0.07	0.00	0.00
19	Chevron - On Peak	0.01	0.01	0.01	0.00	0.00
20	Chevron - Off Peak	0.01	0.01	0.01	0.00	0.00
		100.00	100.00	100.00	0.00	0.00
21	COMPOSITE COST OF PURCHASED ENERGY		0.700	^	0.040	0.0430
	¢/kwh	6.802	6.783	6.772	0.019	0.0110

### Source:

- Col (A): Settlement HECO-WP-934, p. 8.
- Col (B): June 2007 Update HECO-WP-934, p. 8.
- Col (C): Direct Testimony HECO-WP-934, p. 8.

### Hawaiian Electric Company, Inc.

### **Comparison of Sales Heat Rates**

### 2007 Test Year - Adjustment for D&O 23768 - TY05 Rate Case

(btu/kwh sales)

Adjustment for

D&O 23768 -TY05 Rate Case, Settlement and June 2007 Direct Update 1 Testimony 2 Difference Central Station with Wind/Hydro 11,209 11,225 -16 **LSFO** 11,143 11,139 4 Diesel 34,955 32,003 2,952 Wind/Hydro 11,209 11,225 -16

Adjustment for D&O 23768, Settlement, June 2007 Update HECO-WP-936, page 4.

<sup>2</sup> Direct Testimony HECO-WP-936 page 4.

### Hawaiian Electric Company, Inc.

### 2007 TEST YEAR ENERGY COST ADJUSTMENT FACTORS

### ADJUSTMENT FOR D&O 23768 - TY05 RATE CASE

ENERGY COST ADJUSTMENT FACTOR PRESENT RATES ENERGY COST ADJUSTMENT FACTOR PROPOSED RATES

1.986 ¢/KWH

0.000 ¢/KWH

Source: HECO-934, 936

### Hawaiian Electric Company, Inc. ENERGY COST ADJUSTMENT FILING Present Rates

Line				Line			
	Effective Date	2007 Test Year - A	diustment				
		for D&O 23768 TY					
1		Case					
2	Supercedes Factor						
	<b>GENERATION CON</b>	PONENT			<b>PURCHASED</b>	ENERGY COMPONENT	
	FUEL PRICES, ¢/ME	SV. 12 (2/12/100)				ENERGY PRICE - ¢/KWH	
3	Honolulu	7003 FZ	1,105.93	35	THC	- On Peak	14.640
4	Kahe		1,055.65	36	68/15/5378	- Off Peak	11.080
5	Walau-Steam		1,055.65	37	HRRV	- On Peak	12.782
6	Waiau-Waste		0.00	38	5.10(350(5.3)	- Off Peak	9.710
16574	Waiau-Diesel		1,707.34	39	HRRV	- On Peak (excess)	0.000
			.,	40		- Off Peak (excess)	9.710
	BTU MIX, %			41	Chevron	- On Peak	14,640
8	Honolulu		3.58	42		- Off Peak	11.080
9	Kahe		70,31	43	Kalaeloa		9.920
	Waiau-Steam		25.25	44	AES-HI		2.730
	Waiau-Waste		0.00	-27 6/	Brownia Harry		39875 T. T.
	Waiau-Diesel		0.86				
	AND THE PARTY OF T		13755				
13	COMPOSITE COST	OF			PURCHASED	ENERGY KWH MIX, %	
19650	GENERATION, G		1.063.05	45	THC	- On Peak	0.09
14	% Input to system k		58.15	46		- Off Peak	0.07
	Efficiency Factor, Mt		0.011140	47	HRRV	- On Peak	5.83
16	WEIGHTED COMPO	SITE GEN COST.		48		- Off Peak	2.69
	¢/KWH (Line 13)		6.88634	49	HRRV	- On Peak (excess)	0.00
	Processor A & A State	3 % 1050 (105 <b>%</b>		50		- Off Peak (excess)	1.48
17	BASE GENERATION	N COST, d/Mbtu	869.64	51	Chevron	- On Peak	0.01
	Base % Input to Sys		58.41	52		- Off Peak	0.01
	Efficiency Factor, MI		0.011140	53	Kalaeloa		44.17
	WEIGHTED BASE O			54	AES-HI		45.65
	¢/KWH (Line 17:	x 18 x 19)	5.65864				
		,					
21	Cost Less Base (Lin-	e 16 - 20)	1.22770				
22	Revenue Tax Reg M	lultiplier	1.0975				
23	<b>GENERATION FAC</b>	TOR,					
	¢/KWH (Line 21:	x 22)	1.34740	55	COMPOSITE	COST OF PURCHASED	
					ENERGY,	¢/KWH	6.802
	DG ENERGY COMP	PONENT		56	% Input to Sys	stem kWh Mix	41.58
24	COMPOSITE COST	OF DG		57	WTD CMP PU	JRCH ENRGY COST,	
	ENERGY, ¢/kWh	1	18.204		¢/KWH (Li	ne 55 x 56)	2.82827
25	% Input to System k	Wh Mix	0.27				
			•				
26	WTD COMP DG EN	RGY COST,					
	¢/KWH (Line 24:	x 25)	0.04915				
				58	BASE PURCH	HENERGY COMP COST	5.568
27	BASE DG ENERGY	COMP COST	14.076	59	Base % Input	to System kWh Mix	41.50
	Base % Input to Sys		0.09	60		RCH ENERGY COST,	
29	WTD BASE DG EN				¢/KWH (Li	ne 58 x 59)	2.31072
	¢/KWH (Line 27	x 28)	0.01267				
2200			2_000000000				
	Cost Less Base (Lin	e 26 - 29)	0.03648				
	Loss Factor	2 14 26	1.051				
	Revenue Tax Req M	lultiplier	1.0975			se (Line 57 - 60)	0.51755
33	DG FACTOR,				Loss Factor		1.051
	¢/KWH (Line 30	x 31 x 32)	0.04208		Revenue Tax		1.0975
				64		ENERGY FACTOR,	C1201 - 2011 2 2
34	TOTAL GENERATION				¢/KWH (Li	ne 61 x 62 x 63)	0.59698
	¢/KWH (Line 23	+ 33)	1.38948				

### Line SYSTEM COMPOSITE

65	Total Generation and Purchased Energy Factor, ¢/kWh (Line 34 + 64)	1.98646
66	Adjustment, ¢/kWh	0.000
67	ECA Reconciliation Adjustment, ¢/kWh	0.000
68	ENERGY COST ADJUSTMENT FACTOR, ¢/KWH (Line 65 + 66 + 67)	1.986

Reference: HECO-WP-934

### HAWAIIAN ELECTRIC COMPANY, INC.

Comparison of
Composite Cost of Generation - Central Station
At Present Rates and Proposed Rates

### 2007 Test Year - Adjustment for D&O 23768 - TY05 Rate Case

		(A)	(B)	(C)
		At Present Rates	At Proposed Rates	Difference (B)-(A)
_Line				
	FUEL PRICES, ¢/mmbtu			
1	Kahe	1,055.65	1,055.97	0.32
2	Waiau	1,055.65	1,055.65	0.00
3	Honolulu	1,105.93	1,105.93	0.00
4	Diesel	1,707.34	1,707.34	0.00
5	Other		0.00	0.00
	BTU MIX, %			
6	Kahe	70.31	70.31	0.00
7	Waiau	25.25	25.25	0.00
8	Honolulu	3.58	3.58	0.00
9	Diesel	0.86	0.86	0.00
10	Other		0.00	0.00
		100.00	100.00	0.00
11	COMPOSITE COST OF	The state of the s		
2 2	GENERATION ¢/mmbtu	1,063.05	1,063.28	0.23

### Source:

Col (A): HECO-WP-934, p. 3 Col (B): HECO-WP-936, p. 2

#### HAWAIIAN ELECTRIC COMPANY, INC. ENERGY COST ADJUSTMENT (ECA) FILING **Proposed Rates**

ENERGY COST ADJUSTMENT (ECA) FILING - 2007 Test Year - Adjustment for D&O 23768 - TY05 Rate Case (page 1 of 2)

Line	

1 Effective Date

2007 Test Year - Adjustment for D&O 23768 - TY05 Rate Case

2 Supercedes Factors of

	355	Ouper cedes 1	actors of					
				GEN	NERATION	COM	PONENT	
		CENTRAL ST	ATION					
		FUEL PRICES	S, ¢/mmbtu					
	3	Honolulu			1,105.93			
	4	Kahe			1,055.97			
	5	Waiau-Steam			1,055.65			
	6	Waiau-Diesel			1,707.34			
	7	Other			0.00			
		BTU MIX, %				[ <del></del>	DG ENERGY COMPONENT	
	8	Honolulu			3,58	27	COMPOSITE COST OF DG	
	9	Kahe			70.31		ENERGY, ¢/kWh	18,204
	10	Waiau-Steam			25.25	28	% Input to System kWh Mix	0.27
	11	Waiau-Diesel			0.86			I
	12	Other			<u>0.00</u>	29	WTD COMP DG ENRGY COST,	1
					100.00		¢/kWh (Lines 27 x 28)	0.04915
Г	13	COMPOSITE	COST OF GEN	IERATION	<b>*************************************</b>	30	BASE DG ENERGY COMP COST	18,204
П					1,063.28	100000	Base % Input to System kWh Mix	0.27
П	14	CNTRL STN + OTHER ¢/mmbtu  14 % Input to System kWh Mix		58.15		WTD BASE DG ENERGY COST,		
П	33112	70 Input to Cyt	SICIN KITH MIK		35.15	-	¢/kWh (Line 30 x 31)	0.04915
Т		EFFICIENCY	FACTOR, mmb	itu/kWh			p. 1.1.1. (21.1.3 3 5 7.3 1.7	5.0.0.0
-		(A)	(B)	(C)	(D)	33	Cost Less Base (Line 29 - 32)	0.00000
ı		6.3	3-4	Percent of	1-1	1	Loss Factor	1.051
1			Eff Factor	Centrl Stn +	Weighted	35	Revenue Tax Reg Multiplier	1.0975
1		Fuel Type	mmbtu/kwh	Other	Eff Factor		DG FACTOR.	i
1	15	LSFO	0.011143	99.73	0.011113		¢/kWh (Line 33 x 34 x 35)	0.00000
П	16	Diesel	0.034955	0.27	0.000096		· · · · · · · · · · · · · · · · · · ·	
П	17	Other	0.011209	0.00	0.000000			
П		(Lines 15, 1	16, 17): Col(B) >	Col(C) = Col(	D)			
П	18	Weighted Effic	ciency Factor, r	nmbtu/kWh		1		
1		[lines 15(D) -	+ 16(D) + 17(D)	1	0.011209			1.55
	19	WGTD, COM	POSITE CNTRI	_STN+				
1		OTHER GET	N COST, ¢/kWh	İ				
L		(lines (13x14	(x18))		6.93049	]		
	20	DAGE CHITDI	STN + OTHER	CEN COST				
	20	d/mmbtu	OIN TOIRE	, Jav. 6001,	1,063,28			
	21	THE RESIDENCE AND ASSOCIATION	to Sys kWh Mit		58.15			
			tor, mmbtu/kwl		0.011209			
			BASE CNTRL S		0.011200			
	20	GEN COST						
		(lines (20x2	100		6.93049			
		<u> </u>				Г	SUMMARY OF	
	24	COST LESS	BASE (line(19-2	23))	0.00000		TOTAL GENERATION FACTOR, \$/1	kWh
		Revenue Tax		59	1.0975	37	Cntrl Stn+Other (line 26)	0,00000
		CNTRL STN				24 1 1553	3 DG (line 36)	0.00000
		GENERATIO					TOTAL GENERATION FACTOR,	
		¢/kWh (line			0.00000		¢/kWh (lines 37 + 38)	0.00000
							Section 2	

#### HAWAIIAN ELECTRIC COMPANY, INC. ENERGY COST ADJUSTMENT (ECA) FILING Proposed Rates

ENERGY COST ADJUSTMENT (ECA) FILING - 2007 Test Year - Adjustment for D&O 23768 - TY05 Rate Case (page 2 of 2)

### Line PURCHASED ENERGY COMPONENT

	PURCHASE	ED ENERGY PF	RICE, ¢/kWh	
40	THC	- On Peak		14.640
41		- Off Peak		11.080
42	HRRV	- On Peak		12.782
43		- Off Peak		9.710
44	HRRV	- On Peak	(excess)	0.000
45		- Off Peak	(excess)	9.710
46	Chevron	- On Peak		14.640
47		- Off Peak		11.080
48	Kalaeloa			9.920
49	AES-HI			2.730
	PURCHASE	ED ENERGY KV	VH MIX. %	
50	THC	- On Peak		0.09
51		- Off Peak		0.07
52	HRRV	- On Peak		5,83
53		- Off Peak		2.69
54	HRRV	- On Peak	(excess)	0.00
55		- Off Peak	(excess)	1.48
56	Chevron	- On Peak		0.01
57		- Off Peak		0.01
58	Kalaeloa			44.17
59	AES-HI			45.65
				100.00
60	507	E COST OF PL	JRCHASED	
C 4	ENERGY,		<u>u</u>	6.802 41.58
		System kWh Mix COMP, PURC		41.56
02		Wh (lines (60x6		2,82827
63		CHASED ENER		
		ITE COST, ¢/kV		6,802
		out to Sys kWh N		41.58
65		BASE PURCH		
	COST, ¢/	(Wh (lines (63 x	64))	2.82827
66	COST LES	S BASE(lines (6	2 - 65))	0.00000
67	Loss Factor		AND MANAGEMENT	1.051
	Pavenue T	ax Reg Multiplie	Г	1.0975
68	LICACITAC II	ax req wuripne	eŭ:	
		ENERGY FOTF		0.00000

GEN AND PURCHASED ENERGY FACTOR, ¢/kWh (lines (39 + 69))	0.00000
	0.00000
(lines (39 + 69))	
Adjustment, ¢/kWh	0.000
ECA Reconciliation Adjustment	0.000
ECA FACTOR, ¢/kWh	0.000
(lines (70 + 71 + 72))	
	ECA Reconciliation Adjustment ECA FACTOR, ¢/kWh

Reference: HECO-WP-936, HECO-937

## Hawaiian Electric Company, Inc. WEIGHTED COMPOSITE GENERATION COST CALCULATIONS CENTRAL STATION AND OTHER

### 2007 Test Year - Adjustment for D&O 23768 TY05 - Rate Case

### **At Proposed Rates**

	LSFO	<u>Diesel</u>	Other	<u>Total</u>	<u>units</u>
1 Fixed Efficiency Factor	0.011143	0.034955	0.011209		mbtu/kwh
Gen Mwh %     round     Weighted Efficiency Factor	99.73	0.27 0.000001	0.00	100.00	%
(line 1 x line 2)	0.011113	0.000096	0.000000	0.011209	mbtu/kwh

### Reference:

1 HECO-WP-936, page 4.

2 HECO-WP-936, page 3.

### Hawaiian Electric Company, Inc. **Fuel Price for ECAC Calculations**

### 2007 Test Year - Adjustment for D&O 23768 - TY05 Rate Case

	(A)	(B)	(C) Central Station	(D)	(E)	(F) DG
<u>Description</u>	<u>Kahe</u>	<u>Waiau</u>	<u>Honolulu</u>	<u>Diesel</u>	<u>Total</u>	<u>Diesel</u>
1 MBtu Consumed	35,380,212	12,708,603	1,801,590	431,808	50,322,213	223,030
2 Fuel Price (\$/bbl)	65.4412	65.4412	65.4412	99.9771		99.9771
3 Trucking cost per bbl	0.0000	0.0000	3.1170	0.0000		4.4100
4 Inspection Cost per bbl	0.0092	0.0092	0.0092	0.0730		0.0730
5 Fuel Additive Cost per bbl	0.0198	0.0000	0.0000	0.0000		0.0000
6 Heat Content (MBtu/bbl)	6.2	6.2	6.2	5.86		5.86
Fuel Price at Present Rates 7 Fuel Price (\$/bbl)						
8 Fuel Oil	65.4412	65.4412	65,4412	99.9771		99,9771
9 Trucking	0.0000	0.0000	3,1170	0.0000		4,4100
10 Inspection	0.0092	0.0092	0.0092	0.0730		0.0730
11 Fuel Additive	0.0000	0.0000	0.0000	0.0000		0.0000
12 Fuel Price (\$/bbl)	65.4504	65.4504	68.5674	100.0501		104.4601
13 Fuel Price per MBtu (¢/MBtu)	1,055.65	1,055.65	1,105.93	1,707.34		1,782.60
Fuel Price at Proposed Rates						
14 Fuel Price (\$/bbl)						
15 Fuel Oil	65.4412	65.4412	65.4412	99.9771		99.9771
16 Trucking	0.0000	0.0000	3.1170	0.0000		4.4100
17 Inspection	0.0092	0.0092	0.0092	0.0730		0.0730
18 Fuel Additive	<u>0.0198</u>	0.0000	0.0000	0.0000		0.0000
19 Fuel Price (\$/bbl)	65.4702	65.4504	68.5674	100.0501		104.4601
20 Fuel Price per MBtu (¢/MBtu)	1,055.97	1,055.65	1,105.93	1,707.34		1,782.60

= D&O No. 23768

Line 1: HECO-409, page 2 Line 1: HECO-409, page 2
Line 2: HECO-404, pg 1, col B
Line 3: HECO-405, pg 2, col B
Line 4: HECO-405, pg 3, col B
Line 5: Additive \$/bbl calculations:

Additive Expense <sup>(1)</sup> ÷ Kahe bbls consumed <sup>(2)</sup> \$113,000 ÷ 5,706,486 bbls = 0.0198

<sup>(1)</sup> HECO-405, pg 1, line 4 (2) HECO-404, pg 1, line 2

### Hawaiian Electric Company, Inc.

Determination of
Percent of Central Station Generation MBTU Mix
and
Total Generation MBTU Mix

### 2007 Test Year - Adjustment for D&O 23768 - TY05 Rate Case

### At Present and Proposed Rates

		(A)	(B) % to Total Central	(C)	
lina	Central Station Plant	MBTU	Station Plant	% to Total Generation	Reference
LIIIC	Central Station Flant	WIDTO		Generation	reference
1	Kahe	35,380,212	70.31		HECO-409 page 2
2	Waiau	12,708,603	25.25		HECO-409 page 2
3	Honolulu	1,801,590	3.58		HECO-409 page 2
4	LSFO total	49,890,405	99.14		
5	Diesel	431,808	0.86		HECO-409 page 2
6	Total Central Station Plant	50,322,213	100.00	99.56	HECO-409 page 2
					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
7	DG	223,030		0.44	
8	Total Generation	50,545,243		100.00	

### Hawaiian Electric Company, Inc. Net System Percent Mix

### 2007 Test Year - Adjustment for D&O 23768 - TY05 Rate Case

### At Present and Proposed Rates

		(A)	(B)	(C) % to Total	
		2007 Norm		Central	
		Energy	% to Total	Station	
Line		(Mwh)	System	Generation	Reference
	5.		Cyclon	Contractor	TOTOLOG
	Central Station Generation				
1	Kahe	3,464,015			HECO-409 page 2
2	Waiau	1,098,623			HECO-409 page 2
3	Honolulu	141,293			HECO-409 page 2
	subtotal LSFO	4,703,931	57.99	99.73	
4	Diesel	12,971	0.16	0.27	HECO-409 page 2
				* ******	
5	Total Central Station Generation	4,716,902	58.15	100.00	HECO-409 page 2
6	DG	21,840	0.27		HECO-409 page 2
		702h			
	Purchased Power				
7	AES Hawaii, Inc.	1,539,910			HECO-409 page 3
8	Kalaeloa Partners	1,490,246			HECO-409 page 4
9	HPower	337,436			HECO-409 page 5
10	Tesoro	5,304			HECO-RWP-R504
11	Chevron	589			HECO-RWP-R504
12	Total Purchased Power	3,373,485	41.58		HECO-403, line 6
	stories 6		S 340-2		
13	Total Net System	8,112,227	100.00		

### HAWAIIAN ELECTRIC COMPANY, INC.

Composite Cost of Generation

### 2007 Test Year - Adjustment for D&O 23768 - TY05 Rate Case At Present Rates

Line	GENERATION COMPONENT
80.32276.00	

1	FUEL PRICES, ¢/mmbtu Kahe	1,055.65
2	Waiau	1,055.65
3	Honolulu	1,105.93
4	Diesel	1,707.34
	BTU MIX, %	
5	Kahe	70.3
6	Waiau	25.2
7	Honolulu	3.58
8	Diesel	0.86
		100.00
9	COMPOSITE COST OF GENERATION,	
	¢/mmbtu	1,063.0

Line 11: (Line 1x5 + line 2x6 + line 3x7 + line 4x8)

Reference:

HECO-WP-934, p. 1, line 13 HECO-WP-934, p. 2

### Hawaiian Electric Company, Inc.

Determination of Composite Cost of DG Energy

### 2007 Test Year - Adjustment for D&O 23768 - TY05 Rate Case

### At Present and Proposed Rates

	(A)	(B)	(C)	(D)	(E) (colD ÷ colC x 100)	(F) (colD ÷ colB x 100)
	84		Fuel			
		Net to System	Consumed	Fuel Expense	<b>Fuel Cost</b>	Fuel Cost
Line	DG Unit Location	(Kwh)	(Mbtu)	(\$)	_(¢/mbtu)_	(¢/kwh)
1	Substation DG	21,840,000	223,030	3,975,733	1782.60	18.204
2					0.00	0.000
2 3 4					0.00	0.000
4					0.00	0.000
5	Total	21,840,000	223,030	3,975,733	1782.60	18.204
		,				
		Composite DG				
		<b>Fuel Cost</b>	1782.60	1		
6						
		Composite				
		Cost of DG				
7		Energy	18.204	¢/kwh		

Col B: HECO-409 page 2 Col C: HECO-409 page 2 Col D: HECO-404 page 2

### Hawaiian Electric Company, Inc.

Avoided Energy Cost Payment Rates and Schedule Q

### 2007 Test Year - Adjustment for D&O 23768 - TY05 Rate Case At Proposed Rates

Avoided Energy Rate - over 100 kW Source

On-Peak 14.64 ¢/Net Kwh HECO-WP-934, p. 6

Off-Peak 11.08 ¢/Net Kwh HECO-WP-934, p. 6.

Schedule Q Payment Rates - Under 100kW

Payment Rate 12.97 ¢/Net Kwh HECO-WP-934, p. 7.

Determination of Composite Cost of Total (Central Station and DG) Generation For Avoided Cost Calculation Purposes

#### 2007 Test Year - Adjustment for D&O 23768 - TY05 Rate Case At Proposed Rates

Line	Line CENTRAL STATION ENERGY COMPONENT			Line DG ENERGY COMPONENT			
1	Composite Cost of Centrl Stn Gen.	1063.28 ¢/Mbtu	4	Composite Cost of DG Generation	1782.60 ¢/Mbtu		
2	Percent of Centrl Stn Gen. Btu Mix	99.56 %	5	Percent of DG Gen. Btu Mix (100 - line 3)	0.44 %		
3	Weighted Composite Cost of Central Station (line 1 x line 2)	1058.6016 ¢/Mbtu	6	Weighted Composite Cost of DG (line 4 x line 5)	7.8434 ¢/Mbtu		

#### Line Total Generation Composite Cost

Composite Cost of Central Station and DG (line

7 3 + line 6)

1066.45 ¢/Mbtu

Line 1: HECO-WP-936 page 2, line 11 Line 2: HECO-WP-936 page 6, line 1 col.(B) Line 4: HECO-WP-936 page 5, line 6 Line 5: HECO-WP-936 page 6, line 2 col.(B)

#### DERIVATION OF AVOIDED ENERGY COST PAYMENT RATES Avoided Energy Rate - over 100 KW

#### 2007 Test Year - Adjustment for D&O 23768 - TY05 Rate Case At Proposed Rates

Line		ON-PEAK	OFF-PEAK	SOURCE
1	Heat Rate	13,382 BTU / NET KWH	9,929 BTU / NET KWH	Docket #4569, HECO-101
2	Composite Fuel Cost of Total Generation (Centrl Stn & DG)	1,066.45 ¢ / MMBTU	1,066.45 ¢ / MMBTU	Test Year 2007 Composite Fuel Cost.
3	1 MMBTU / 1,000,000 BTU	1,000,000 BTU / MMBTU	1,000,000 BTU / MMBTU	
4	Unadjusted Payment Rate (line 1 x 2) / line 3	14.27 ¢ / NET KWH	10.59 ¢ / NET KWH	
5	O&M Adjustment	0.37 ¢ / NET KWH	0.49 ¢/NET KWH	Appendix A, D&O 8298
5	Odin Adjustinent	U.JI GINEI KWII	0.49 ¢/NEI KWH	Appendix A, D&O 0290
6	BASE Avoided Energy Payment Rate	14.64 ¢ / NET KWH	11.08 ¢ / NET KWH	

Reference: Line 2: HECO-WP-936, pg. 7, line 7.

#### DERIVATION OF SCHEDULE "Q" PAYMENT RATES Schedule "Q" Rate - Under 100 KW

#### 2007 Test Year - Adjustment for D&O 23768 - TY05 Rate Case At Proposed Rates

<u>Line</u>	ON-PEAK	OFF-PEAK	SOURCE
Heat Rate     Composite Fuel Cost of Total	13,382 BTU / NET KWH	9,929 BTU / NET KWH	Docket #7766 Test Year 2007
2 Generation (Centrl Stn & DG)	1,066.45 ¢ / MMBTU	1,066.45 ¢ / MMBTU	Composite Fuel Cost.
3 1 MMBTU / 1,000,000 BTU	1,000,000 BTU / MMBTU	1,000,000 BTU / MMBTU	
4 Unadjusted Payment Rate (line 1 x 2) / line 3	14.27 ¢ / NET KWH	10.59 ¢/NET KWH	
5 Power Factor Adjustment	-0.12 ¢ / NET KWH	-0.28 ¢ / NET KWH	Appendix A, D&O 8298
6 O&M Adjustment	0.37 ¢ / NET KWH	0.49 ¢ / NET KWH	Appendix A, D&O 8298
Pre Time-Weighted "Q" Payment 7 Rate (line 4 + line 5 + line 6)	14.52 ¢ / NET KWH	10.80 ¢/NET KWH	
8 Hour Weighting	x 14/24 HOURS / HOURS	x 10/24 HOURS / HOURS	
Time-weighted Peak Time-Related Schedule "Q" Energy Payment 9 Rate (line 7 x 8)	8.47 ¢ / NET KWH	4.50 ¢/NET KWH	
10 Time-Weighted "Q" ON PEAK Pay	ment Rate 8.47	¢/NET KWH	
11 Time-Weighted "Q" OFF PEAK Pa	yment Rate 4.50	¢/NET KWH	
Schedule "Q" Energy Payment 12 Rate (line 10 + line 11)	12.97	¢ / NET KWH	
13 Base 1996 Schedule "Q" Energy F	Payment Rate 3.67	¢ / NET KWH	Filed January 1, 1996
Difference Between 2007 Test Ye and Base Sch "Q" Rates (line 12 -	2000 A 200 A 2	¢/NET KWH	

Reference: Line 2: HECO-WP-936, pg. 7, line 7.

Determination of Percent of Purchased Energy Mix,
Payment Rate (in ¢/kwh) and
Composite Cost of Purchased Energy (in ¢/kwh)

#### 2007 Test Year - Adjustment for D&O 23768 - TY05 Rate Case At Present and Proposed Rates

	(A)	(B)	(C)	(D)	(E) Weighted Cost	(F) Purch Pwr
			% to	Payment	(¢/kwh)	Fuel
		Gwh	Total	Rate	[ (colF ÷ colB)	Expense
No.	Producer	Purchased	PP	(¢/kwh)	* colC * 1000 ]	(\$ thous)
			3			
1	Kalaeloa					
	Fuel	1,490.2	44.17	9.760		145,448.6
	Additive			<u>0.160</u>		<u>2,386.4</u>
	Total	1,490.2		9.920	4.382	147,835.0
2	AES					
	Fuel	1,539.9	45.65	2.730	1.246	42,037.2
	III Santa (1864)					
3	HPower	1000	C 00	40	0 715	05 450 0
	On Peak	196.8	5.83	12.782	0.745	25,159.8
	Off Peak	90.6	2.69 0.00	9.710	0.261 0.000	8,798.2
	On Peak - excess Off Peak - excess	0.0 <u>50.0</u>	1.48	0.000 9.710	0.000	0.0 4 <u>,853.9</u>
	Total	337.4	1,40	9.7 10	0.144	38,811.9
	Total	337.4				30,011.3
4	Tesoro					
	On Peak	3.1	0.09	14.640	0.013	453.0
	Off Peak	<u>2.2</u>	0.07	11.080	0.008	244.9
	Total	5.3				697.9
5	Chevron					
	On Peak	0.4	0.01	14.640	0.001	50.3
	Off Peak	0.2	0.01	11.080	0.001	27.2
	Total	0.6				77.5
6	Other	*		0.000	0.000	
7	Total	3,373.5	100.00		6.802	229,459.5
	Composite Cost of					
8	Purchased Energy				6.802	¢/kwh

= settlement change

Line 1: HECO-WP-501, pg. 1 Line 2: HECO-WP-503, pg. 1 Line 3: HECO-WP-504, pg. 2 Lines 4&5: HECO-504 Line 7, col B: HECO-403, line 6

### HAWAIIAN ELECTRIC COMPANY, INC.

Composite Cost of Central Station Generation

# 2007 Test Year - Adjustment for D&O 23768 - TY05 Rate Case At Proposed Rates

3		
15		
	1e	1e

### **GENERATION COMPONENT**

Central Station and Other

	Contact Cadon and Caron	
	FUEL PRICES, ¢/mmbtu	
1	Kahe	1,055.97
2	Waiau	1,055.65
3	Honolulu	1,105.93
4	Diesel	1,707.34
5	Other	0.00
	BTU MIX, %	
6	Kahe	70.31
7	Waiau	25.25
8	Honolulu	3.58
9	Diesel	0.86
10	Other	0.00
		100.00

11	COMPOSITE COST C	F GENERATION,	
	Central Stn + Other	¢/mmbtu	1,063.28

Line 11: (Line 1x6 + line 2x7 + line 3x8 + line 4x9 + line 5x10)

#### Reference:

HECO-WP-934, p. 1, line 20 HECO-WP-936, p. 1

Determination of Fixed Efficiency Factor or Sales Heat Rate (Mbtu / Kwh Sales)
2007 Test Year - Adjustment for D&O 23768 - TY05 Rate Case
At Proposed Rates

Line			Reference
1	Total Central Station Fuel Sales Heat Rate Total Central Station Fuel Consumed	50,322,213 Mbtu	HECO-409 page 2
	Sales % of Central Stn to Total System Kwh/Gwh Conversion	7,720.8 Gwh 58.15 Percen 1,000,000 kwh/gw	HECO-403, line 1 t HECO-403, line 7a
5	Sales Heat Rate [line 1 ÷ (line 2 x line 3 x line 4)]	0.011209 Mbtu/K	wh Sales
6	LSFO Sales Heat Rate LSFO Fuel Consumed	49,890,405 Mbtu	HECO-409 page 2
7 8 9	Sales % of LSFO Fuel Generation to Total System Kwh/Gwh Conversion	7,720.8 Gwh 57.99 Percen 1,000,000 kwh/gw	
10	Sales Heat Rate [line 6 ÷ (line 7 x line 8 x line 9)]	0.011143 Mbtu/K	wh Sales
11	Diesel Fuel Sales Heat Rate Diesel Fuel Consumed	431,808 Mbtu	HECO-409 page 2
13	Sales % of Diesel Fuel Generation to Total System Kwh/Gwh Conversion	7,720.8 Gwh 0.16 Percen 1,000,000 kwh/gv	
15	Sales Heat Rate [line 11 ÷ (line 12 x line 13 x line 14)]	0.034955 Mbtu/k	Kwh Sales
16	HECO Other Sales Heat Rate Total Central Station Fuel Consumed	50,322,213 Mbtu	
18	Sales % of Central Stn to Total System Kwh/Gwh Conversion	7,720.8 Gwh 58.15 Percer 1,000,000 kwh/gv	
20	Sales Heat Rate [line 16 ÷ (line 17 x line 18 x line 19)]	0.011209 Mbtu/k	Kwh Sales

DG and Purchased Energy Loss Factor Calculations

# 2007 Test Year - Adjustment for D&O 23768 - TY05 Rate Case

# **At Proposed Rates**

Line		Reference
1 Net to System (gwh)	8,113.0	HECO-403, line 5
2 Sales (gwh)	7,720.8	HECO-403, line 1
3 DG & Purchase Power Loss Factor	1.051	Line 1 ÷ Line 2

Hawaiian Electric Company, Inc.
Docket No. 2006-0386
2007 Test Year Rate Case
Electric Sales Revenues at Current Effective Rates
(\$000s)

Reference	June 2007 Update, HECO T-3, pages 4 and 6, Supplemental	Stipulated Settlement Letter, filed September 6, 2007, Exhibit 1, page 1. See also August 2007 Supplement filed September 6, 2007, HECO T-3, Attachment 1, page 1.	Stipulated Settlement Letter, filed September 6, 2007, Exhibit 1, pages 2 - 4 and HECO T-9 Attachment 7, page 1. See also August 2007 Supplement filed September 6, 2007, HECO T-3, Attachment 1, page 1.	Interim Decision and Order No. 23749, Exhibit A, page 1
Explanation	Includes 8 months of revenues in the test year for the interim surcharge for DG fuel and trucking and LSFO trucking costs at current effective rates, as approved by Order No. 23377 in Docket No. 04-0113.  Calculation: (0.0694 cents/kWh x 8/12 x 7,720,801 forecasted MWh = \$3,572.1)	In Settlement, HECO agreed to include \$5,358.2 (\$3,572.1 + \$1,786.08) of revenues in the test year, which constitutes 12 months of revenue for the interim surcharge for DG fuel and trucking and LSFO trucking costs. The adjustment of \$1,786.08 represents the 4 additional months of interim surcharge revenues at current effective rates.  Calculation: (0.0694 cents/kWh x 4/12 x 7,720,801 forecasted MWh)	In Settlement, the parties agreed on the methodology for calculating the Energy Cost Adjustment Factors ("ECAF") and the ECAF of \$7.340 cents/kWH at present rates. The adjustment of \$694.87 represents the additional test year ECAC revenues, which incorporates the net change in the ECAFs at present rates of .009 cents/kWh (7.340 cents/kWh per June 2007 Update).  Calculation: (.009 cents/kWH multiplied by 7,720,801 forecasted MWh)	
Revenues @ Current Effective Rates	\$1,404,092.40	\$1,786.08	\$694.87	\$1,406,573.00
Line # Description	1 Updated Test Year Electric Sales Revenues	2 Adjustment - Additional Test Year Revenues for the Interim Surcharge for DG Fuel and Trucking and LSFO Trucking Costs	3 Adjustment - Additional Test Year ECAC Revenues	
□ *				

HECO T-3 ATTACHMENT 1 PAGE 1 OF 1 AUGUST 2007 SUPPLEMENT

R B S H C B жы-т884г \$7,398.8 \$141,675.8 \$333,136.5 \$26,240.7 \$81,132.2 \$7,167.1 \$1,406,573.2 \$374,498.4

\$435,323.7

\$258.0

(\$206.1) \$847.3) (\$16.8)

\$1,061.5)

\$278,646.4

6,60%

\$416,594.2 \$77,843.8

\$156,261,3

(\$1,061.5)

4

AES (3)

\$1,477.5 \$1,435.7

SURCHARGE INTERIM

FO EE

increase % Interim Increase

Total [5]

Interim Rate Base Including

Current Effective Rates (\$000s)

Estimation of Test Year Revenue - June 2007 Update

Present Rates (\$000S)

Hawalian Electric Company, Inc. Dooket No. 2006-0386 Test Year 2007

\$28.1 \$580.1 \$1,431.0 \$121.6 \$26.2

\$501.9) \$686.7) (\$54.1) (\$16.3)

\$53,790.2 \$22,060.1 \$4,414.8 \$80,045.7 \$181,042.6 \$13,316.4 \$4,382.7

\$359,705.7 \$7,094.3 \$135,407.4 \$319,798.4

\$27,290.1 \$151,849.9 \$2,972.7 \$61,351.9 \$151,349.6 \$12,856.8

\$301.9)

(\$16.8)

\$4,138.4

(\$847.3)

(\$206.1)

\$50,759.8

\$261,394.4 \$208,703.1

2,128,900

2

Forecast MWh

Schedule Rate

Line

7.65% 7.04% 0.00% 9.33%

\$26,119.1 \$6,766.9

(\$686.7) (\$54.1) (\$16.3)

\$74,357.4 \$169,135.5 \$13,316.4

371,800 2,068,800 40,500 835,857 2,061,983 175,161 37,800

5.97% 6.40% 6.68%

\$156,261.3 \$27,290.1 \$151,849.9 \$2,972.7 \$61,351.9 \$151,349.6 \$12,856.8 \$2,774.5

\$5,358.2

\$566,706.8

(\$3,190.7)

\$837,698.9

\$1,349,329.8

\$566,706.8

(\$3,190.7)

\$785,813.7

7,720,801

9 Total

\$4,008.7

Interin Increase in 2005 Test year Rate Care Interim Surcharge for Dis Fuel, DG Trucking, LSFO Trucking of 0.0694 cents/kWh is applied to Forecast MWh Diff= \$51,885,20

Estimation of Test Year Revenue - Direct Testimony

Current Effective Rates (\$000s) Present Rates (\$000S)

\$432,976.6 \$80,721.8 \$372,286.2 \$7,354.1 \$140,747.4 \$331,021.2 \$26,047.3 \$7,125.4 \$1,398,279.0 [10] \$155,388.4 \$27,137.7 \$151,001.7 \$2,956.1 \$61,009.2 \$12,785.0 \$2,759.0 \$563,541.2 FOA BE (\$206.1) (\$847.6) (\$16.8) (\$301.9) (\$687.3) (\$54.1) (\$3,191.6) \$1,061.5) \$278,648.7 \$53,790.2 \$222,132.1 \$4,414.8 \$181,204.4 \$13,316.4 \$4,382.7 Interim Increase Base Including \$837,929.4 6.60% 5.97% 6.40% 6.68% 7.65% 7.04% 9.33% Interim Rate Increase % \$415,723.4 \$77,691.4 \$358,924.9 \$7,077.7 \$135,059.5 \$319,103.4 \$26,047.3 \$6,751.4 \$1,346,379.0 \$155,388.4 \$27,137.7 \$151,001.7 \$2,956.1 \$61,009.2 \$150,504.1 \$12,785.0 \$2,759.0 \$563,541,2 FOA 4 (\$1,061.5) (\$206.1) (\$847.6) (\$3,191.6) (\$301.9) (\$16.3) (\$16.8) (\$54.1) \$169,286.6 \$13,316.4 \$4,008.7 \$50,759.8 \$4,138.4 \$74,352.2 \$786,029.4 \$261,396.5 2 2,128,900 371,800 2,068,800 835,857 2,061,983 175,161 37,800 40,500 7,720,801 Schedule Rate 18 Total 11 G 12 J 12 J 14 PS 15 PP 16 PT 17 F Line

C:ODCUME-10-4kawalLODALS-11TemptTemporary Directory 1 for Settloment - August 2007 Sup UPDATE,ziptT-3tHECD T-3 All. 1 TY2007 Electric Rev AES Ad\_at present rates xis TY Revenuest21 AM

Revenue

# DOCKET NO. 2006-0386 WITHOUT INTEREST SYNCHRONIZATION

Hawaiian Electric Company, Inc.
Adjusted Interim at Current Effective Rates
Results of Operations

(\$ Tho	ousands)		Requirements to Produce 8.62%
	Current Effective Rates	Additional Amount	Return on Average Rate Base
Electric Sales Revenue Other Operating Revenue Gain on Sale of Land	1,398,765 3,406 500	77,065 718	1,475,830 4,124 500
TOTAL OPERATING REVENUES	1,402,671	77,783	1,480,454
Fuel Purchased Power Production Transmission Distribution Customer Accounts Allowance for Uncoll. Accounts Customer Service Administration & General Gen Excise Tax Rate Incr Adj	543,874 387,492 67,597 10,272 24,663 11,720 970 5,890 69,189 328	0	543,874 387,492 67,597 10,272 24,663 11,720 970 5,890 69,189 328
Operation and Maintenance  Depreciation & Amortization Amortization of State ITC Taxes Other Than Income Interest on Customer Deposits Income Taxes  TOTAL OPERATING EXPENSES	1,121,995  78,763 (1,304) 130,706 377 15,593  1,346,130	6,894 27,583 34,477	1,121,995  78,763 (1,304) 137,600 377 43,176  1,380,607
OPERATING INCOME	56,541	43,306	99,847
AVERAGE RATE BASE	1,159,090	(774)	1,158,316
RATE OF RETURN ON AVERAGE RATE BASE	4.88%		8.62%

Hawaiian Electric Company, Inc.

Adjusted Interim at Current Effective Rates
COMPOSITE EMBEDDED COST OF CAPITAL
Estimated Average

	Estimated	Average		
	А	В	С	D
	Capit	calization		
	Amount in Thousands	Percent of Total	Earnings Reqmts	Weighted Earnings Reqmts (B) x (C)
Short-Term Debt	38,971	3.08	5.00%	0.154%
Long-Term Debt	480,727	38.01	6.09%	2.314%
Hybrid Securities	27,556	2.18	7.47%	0.163%
Preferred Stock	20,586	1.63	5.51%	0.090%
Common Equity	696,826	55.10	10.70%	5.896%
Total	1,264,666	100.00		
Estimated Composite	Cost of Capi	tal		8.617%
			or	8.62%

EXHIBIT 3 PAGE 3 OF 13

Hawaiian Electric Company, Inc.

# Adjusted Interim at Current Effective Rates AVERAGE RATE BASE (\$ Thousands)

	Beginning Balance	End of Year Balance	Average Balance
Investments in Assets Serving Customers			
Net Cost of Plant in Service Property Held for Future Use Fuel Inventory Materials & Supplies Inventories Unamort. Net SFAS 109 Reg. Asset Pension Asset OPEB Amount Unamort Sys Dev Costs Unamort DSG Reg Asset ARO Reg Asset  Total Investments in Assets	1,331,363 517 53,084 12,838 53,483 0 0 0 27 1,451,312	1,370,649 3,567 53,084 12,838 55,970 0 4,642 0 26 1,500,776	1,351,006 2,042 53,084 12,838 54,727 0 2,321 0 27
Funds From Non-Investors	1,401,012	1,300,770	1,470,043
Unamortized CIAC Customer Advances Customer Deposits Accumulated Def. Income Taxes Unamort State ITC (Gross) Unamortized Gain on Sale Total Deductions	164,092 1,001 6,369 135,254 28,523 1,582 336,821	176,802 756 6,827 130,294 30,044 1,214 345,937	170,447 879 6,598 132,774 29,284 1,398 341,380
Difference			1,134,665
Working Cash at Current Effective	Rates	_	24,425
Rate Base at Current Effective Ra	tes		1,159,090
Change in Rate Base - Working Cas	h		(774)
Rate Base at Proposed Rates		-	1,158,316

Hawaiian Electric Company, Inc.

# Adjusted Interim at Current Effective Rates WORKING CASH ITEMS

	A	В	C NET	D
	COLLECTION LAG (DAYS)	PAYMENT LAG (DAYS)	COLLECTION LAG (DAYS) (A - B)	ANNUAL AMOUNT
ITEMS REQUIRING WORKING CASH			Macate Macate €11	
Fuel Oil Purchases	37	17	20	537,767
0&M Labor	37	11	26	88,209
O&M Nonlabor	37	34	3	100,922
Pension Asset Amortization	37	0	37	_
ITEMS THAT PROVIDE WORKING CAS	Н			
Revenue Taxes	37	66	(29)	124,412
Income Taxes-Present Rates	37	40	(3)	17,728
Income Taxes-Proposed Rates	37	40	(3)	45,311
Purchased Power	37	39	(2)	387,492
	E	F	G	Н
		WORKING		WORKING
	AVERAGE	CASH	AVERAGE	CASH
	DAILY	(PRESENT	DAILY	(PROPOSED
	AMOUNT	RATES)	AMOUNT	RATES)
	(D/365)	(C X E)	(PROPOSED)	(C X G)
ITEMS REQUIRING WORKING CASH				
Fuel Oil Purchases	1,473	29,467	1,473	29,467
O&M Labor	242	6,283	242	6,283
O&M Nonlabor	276	829	276	829
Pension Asset Amortization	0	0	0	0
ITEMS THAT PROVIDE WORKING CAS	Н			
Purchased Power	1,062	(2, 123)	1,062	(2, 123)
Revenue Taxes	341	(9,885)	360	(10, 432)
Income Taxes-Present Rates	49	(146)		
Income Taxes-Proposed Rates	124	·	124	(372)
Total	_	24,425		23,652
Change in Working Cash				(773)

Hawaiian Electric Company, Inc.

# Adjusted Interim at Current Effective Rates COMPUTATION OF INCOME TAX EXPENSE

	Current Effective Rates	Adjustment	At Proposed Rates
Operating Revenues	1,402,671	77,783	1,480,454
Operating Expenses: Fuel Oil and Purchased Power Other Operation & Maintenance	931,366		931,366
Expense	190,629	0	190,629
Depreciation	78,763		78,763
Amortization of State ITC	(1,304)		(1,304)
Taxes Other than Income	130,706	6,894	137,600
Interest on Customer Deposits	377		377
Total Operating Expenses	1,330,537	6,894	1,337,431
Operating Income Before Income Taxes	72,134	70,889	143,023
Tax Adjustments: Interest Expense Meals and Entertainment	(30,597) 81		(30,597) 81
	(30,516)	0	(30,516)
Taxable Income at Ordinary Rates	41,618	70,889	112,507
Income Tax Exp at Ordinary Rates	16,193	27,583	43,776
Tax Benefit of Domestic Production Activities Deduction Tax Effect of Deductible Preferred	577		577
Stock Dividends	23		23
TOTAL INCOME TAX EXPENSE	15,593	27,583	43,176
		· · · · · · · · · · · · · · · · · ·	

Hawaiian Electric Company, Inc.

Adjusted Interim at Current Effective Rates COMPUTATION OF TAXES OTHER THAN INCOME TAX

		At Curr Eff		At Proposed
	Rate	Rates	Adjustment	Rates
Electric Sales Revenue		1,398,765	77,065	1,475,830
Other Operating Revenue		3,406	718	4,124
Operating Revenues		1,402,171	77,783	1,479,954
Public Service Tax	5.885%	82,461	4,578	87 <b>,</b> 039
PUC Fees	0.500%	7,006	389	7,395
Franchise Tax	2.500%	34,945	1,927	36,872
Payroll Tax	2	6,294	£82	6,294
TOTAL TAXES OTHER THAN INC	COME TAX	130,706	6,894	137,600

Hawaiian Electric Company, Inc.

# Adjusted Interim at Current Effective Rates CALCULATIONS OF REVENUE REQUIREMENTS

OPERATING INCOME AT CURRENT EFFECTIVE RATES:	
Operating Revenues	1,402,671
Fuel and Purchased Power Expenses	931,366
Other O&M Expenses	190,629
Depreciation & Amortization Expense Amortization of State ITC	78,763
Taxes Other than Income	(1,304) 130,706
Interest on Customer Deposits	377
Income Taxes	15,593
Total Operating Expenses	1,346,130
OPERATING INCOME AT CURRENT EFFECTIVE RATES	56,541
CALCULATIONS OF REVENUE REQUIREMENTS: OPERATING INCOME	4.450.046
Rate Base at Proposed Rates	1,158,316 8.62%
Proposed Rate of Return on Rate Base x	8
Operating Income	99,847
Less: Operating Income at Current Effective Rate	56,541
INCREASE IN OPERATING INCOME	43,306
OPERATING REVENUES: Increase in Operating Income Operating Income Divisor (divided by)	43,306 0.55677
operating income Divisor (divided by)	<u> </u>
INCREASE IN OPERATING REVENUES	77,783
Increase in Electric Sales Revenue Other Operating Revenue Rate x	77,065 0.932%
Increase in Other Operating Revenues	718
	77,783

Hawaiian Electric Company, Inc.

# Adjusted Interim at Current Effective Rates CALCULATIONS OF REVENUE REQUIREMENTS

BAD DEBT:		
Increase in Electric Revenues		77,065
Bad Debt Rate	Х	0.0000
INCREASE IN BAD DEBT EXPENSE		0
REVENUE TAX:		
Increase in Operating Revenues		77,783
Less: Increase in Bad Debt Expense		0
	-	77,783
PSC Tax & PUC Fees Rate	X	6.385%
	_	4,967
Increase in Electric Revenues		77,065
Less: Increase in Bad Debt Expense		0
	25	77,065
Franchise Tax Rate	Х	2.500%
		1,927
INCREASE IN REVENUE TAX	94 94	6,894
INCOME TAX:		
Increase in Operating Revenues		77,783
Effective Income Tax Rate after considering		
revenue tax & bad debt	x	35.462%
INCREASE IN INCOME TAX		27,583
INCREASE IN OPERATING INCOME (check)	<del></del>	43,306
	1	

# Adjusted Interim at Current Effective Rates CALCULATIONS OF REVENUE REQUIREMENTS

	A	B AVERAGE	C	D WORKING	
	EXPENSE	DAILY AMOUNT	NET COLLECTION	CASH REQMT	
_	AMOUNT	(A/365)	LAG (DAYS)	(B) x (C)	
Increase in Revenue Tax	6,894	19	(29)	(548)	
Income Tax at present rates	17,728	49	(3)	146	
Income Tax at proposed rate	45,311	124	(3)	(372)	
CHANGE IN RATE BASE - WORKING	(774)				
Rate Base at Present Rates				1,159,090	
PROPOSED RATE BASE			_	1,158,316	
Operating Income at Present I	Rates			56,541	
Increase in Operating Income			-	43,306	
OPERATING INCOME AT PROPOSED	RATES		_	99,847	
PROPOSED RATE OF RETURN ON RA	ATE BASE (ch	eck)		8.62%	

Hawaiian Electric Company, Inc.

OPERATING REVENUES:	
Electric Sales Revenues	1,398,765
Other Operating Revenues	3,406
Gain on Sale of Land	500
TOTAL OPERATING REVENUES	1,402,671
FUEL OIL AND PURCHASE POWER EXPENSES:	
Fuel Oil Expense	537,767
Fuel Related Non-labor Exp	5,207
Fuel Handling Labor Expense	900
Fuel Oil Expense	543,874
Purchased Power Expense	387,492
TOTAL FUEL OIL AND PURCHASE POWER EXPENSES	931,366
OTHER OPERATION & MAINTENANCE EXPENSES:	
Production	67,597
Transmission	10,272
Distribution	24,663
Customer Account	11,720
Allowance for Uncollectible Accounts	970
Customer Service	5 <b>,</b> 890
Administration & General	69,189
Gen Excise Tax Rate Incr Adj	328
TOTAL OTHER OPERATION & MAINTENANCE EXPENSES	190,629

#### Hawaiian Electric Company, Inc.

TOTAL FUEL OIL & PP AND OTH O&M EXPENSES (LABOR/NON)	LABOR)
Fuel Oil Expense	537,767
Purchase Power Expense	387,492
Total Labor Expense	
Labor Expense	88,209
Total Labor Expense	88,209
Total Nonlabor Expense	
Nonlabor Expense	103,320
Fuel Related Expense	5,207
Payroll Taxes	6,294
Bad Debt Expense	(970)
Pension Expense	(12,929)
Pension Asset Amortization	0
	100,922
TOTAL FUEL OIL & PP, OTH O&M AND PR TAX EXPENSES	1,114,390
REVENUE TAX Public Service Tax	
Electric Sales Revenues	1,398,765
Other Operating Revenues	3,406
Less: Bad Debt Expense	(970)
Operating Revenues subject to PSC Tax	1,401,201
Public Service Tax Rate x	5.885%
Total PSC Tax	82,461
	,
PUC Fees	
Electric Sales Revenues	1,398,765
Other Operating Revenues	3,406
Less: Bad Debt Expense	(970)
Operating Revenues subject to PSC Tax	1,401,201
PUC Tax Rate x	0.500%
Total PUC Tax	7,006

### Hawaiian Electric Company, Inc.

Franchise Tax	
Electric Sales Revenues	1,398,765
Less: Bad Debt Expense	(970)
•	1,397,795
Franchise Tax Rate x	2.500%
Total Franchise Tax	34,945
TOTAL REVENUE TAX	124,412
INTEREST EXPENSE:	
Interest Charged to Operations	33,275
AFUDC Debt	(2,678)
TOTAL INTEREST EXPENSE	30,597
INCOME TAX EXPENSE SUMMARY	
Current	17,728
Deferred	(4,960)
State ITC	2,825
Pension Asset Amortization	0
TOTAL INCOME TAX EXPENSE	15,593
CALCULATIONS OF REVENUE TAX RATE:	
Franchise Tax Rate adjusted for Change in Oth Oper	
Revenues and Bad Debt	0.02477
PSC Tax Rate adjusted for Bad Debt	0.05885
PUC Tax Rate adjusted for Bad Debt	0.00500
REVENUE TAX RATE	0.08862
CALCULATIONS OF COMPOSITE INCOME TAX RATE:	
State Tax Rate	0.06015
Federal Tax Rate	0.35000
State Tax Rate	0.06015
Federal Tax Rate x	0.06013
Federal Tax Effect on State Tax	(0.02105)
COMPOSITE INCOME TAX RATE	0.38910

Hawaiian Electric Company, Inc.

CALCULATIONS OF COMPOSITE CAPITAL GAINS TAX RATE: State Capital Gains Tax Rate Federal Tax Rate	0.03759 0.35000
State Capital Gains Tax Rate Federal Tax Rate x	0.03759 0.35000
Federal Tax Effect on State Capital Gains Tax Rate	(0.01316)
COMPOSITE CAPITAL GAINS TAX RATE	0.37444
CALCULATIONS OF EFFECTIVE INCOME TAX RATE: PSC Tax & PUC Fees Rates adjusted for Bad Debt	0.06385
Franchise Tax adjusted for Change in Oth Oper Rev and Bad Debt	0.02477
Bad Debt Rate adjusted for Change in Oth Oper Rev Revenue Tax and Bad Debt rate	0.08862
Rev Tax & Bad Debt Reciprocal (1 - 0.08862) Composite Income Tax Rate x	0.91138 0.38910
EFFECTIVE INCOME TAX RATE AFTER CONSIDERING REVENUE TAX & BAD DEBT	0.35462
CALCULATIONS OF OPERATING INCOME DIVISOR: PSC Tax & PUC Fees Rates	0.06385
Franchise Tax adjusted for Change in Oth Oper Rev	0.02477
Bad Debt Rate adjusted for Change in Oth Oper Rev Effective Income Tax Rate after considering	(=
revenue tax & bad debt	0.35462
	0.44323
OPERATING INCOME DIVISOR (1 - 0.44323)	0.55677

### HECO T-9 ATTACHMENT 2 PAGE 1 OF 1

	101AL	5,875.39 61,449.97 33,568.86 18,086.96 4,460.98 7,22,320.97	5,875,39 30,278,89 33,568,86 18,066,96 3,345,73 91,135,82	9,814,15 34,572,58 18,066,96 5,82,15,76 3,791,83 13,392,58 137,363,86	41,988.95 18,086.96 4,460.98 7 5,301.23 1 69,818.12	20,520,50 17,732,39 3 3,791,83 42,044,72	20,464.74		527,915.44 2,736.07 2,230.49 5,966.56	7 106,171,27	112,137.83	640,053.27		674,291.27
	Non-Labor	1,748 89 20,620 87 11,264.76 6,062.76 1,496.98 8,645.77 49,840.02	1,748 89 10,160.74 11,264.76 6,062.76 1,122.73 30,359.87	3,293,35 11,601,58 6,062,76 19,535,56 1,272,43 5,187,46 46,953,14	14,090.30 6,062.76 1,496.98 2,053.37 23,703.41	6,886,10 5,950,49 1,272,43 14,109,02	6,867,39	6,998.37	1,253.72 748.49 2,002.21	35,628.07 35,628.07			11,489 30	
	(150) + (421) <u>Labor</u>	4,126.50 40,829.10 22,304.10 12,004.20 2,964.00 13,675.20 95,903.10	4,126.50 20,118.15 22,304.10 12,004.20 2,223.00 60,775.95	6,520,80 22,971,00 12,004,20 38,680,20 2,519,40 8,205,12 90,900,72	27,898.65 12,004.20 2,964.00 3,247.86 46,114.71	13,634.40 11,781.90 2,519.40 27,935.70	13,597.35	13,856.70	2,482,35 1,482,00 3,964,35	70,543.20			22,748.70	
	PR taxes	306 19 2,955 81 1,614 70 869 04 214.58 951 37 6,911 68	306.19 1,456.45 1,614.70 869.04 160.93 4,407.30	472 07 1,662 98 869 04 2,800 24 182.39 570 82 6,557.54	2,019 71 869.04 214.58 225.95 3,329.28	987.06 852.95 182.39 2,022.40	984.38 984.38	1,003.15	179.71 107.29 287.00	5,106.95 5,106.95			0.0818 1,646.88	
	(423) PR taxes	0.0818 0.0818 0.0818 0.0818 0.0818	0.0818 0.0818 0.0818 0.0818	0.0818 0.0818 0.0818 0.0818 0.0818	0.0818 0.0818 0.0818	0.0818 0.0818	0.0818	0.0818	0.0818	0.0818				
	Emp Ben	1,107 00 13,554 60 7,404 60 3,985.20 984.00 5,904.00 32,939.40	1,107.00 6,678.90 7,404.60 3,985.20 738.00 19,913.70	2,164.80 7,626.00 3,985.20 12,841.20 836.40 3,542.40	9,261.90 3,985.20 984.00 1,402.20	4,526,40 3,911.40 836.40 9,274.20	4,514.10	4,600.20	824.10 492.00 1,316.10	23,419.20			7,552.20	
Ses	(422) Corp Adm Emp Ben	12.30 12.30 12.30 12.30 12.30	12.30 12.30 12.30 12.30	12.30 12.30 12.30 12.30 12.30	12 30 12 30 12 30	12.30 12.30 12.30	12.30	12.30	12.30	12.30			12 30	
ent 2 Employees and Expen	Corp Adm	335.70 4,110.46 2,245.46 1,208.52 298.40 1,790.40 9,988.94	335.70 2,025.39 2,245.46 1,208.52 223.80 6,038.87	656.48 2,312.60 1,208.52 3,894.12 253.64 1,074.24 9,399.60	2,808.69 1,208.52 298.40 425.22 4,740.83	1,372.64 1,186.14 253.64 2,812.42	1,368.91	1,395.02	249.91 149.20 399.11	7,101.92			2,290.22	
Attachment 2 Regular HECO Employees DSM Labor Hours and Expenses	(406) Corp Adm	67.6 87.6 87.6 87.6 87.6 87.6	3.73 3.73 3.73 5.73 8.73	3.73 3.73 3.73 3.73 3.73	3.73 3.73 3.73	3.73 3.73 3.73	3.73	3.73	3.73	3.73			3.73	
Regu DSM La	MdN	383 40 4,694 52 2,564 52 1,380 24 340 80 2,044 80 11,408 28	383.40 2,313.18 2,564.52 1,380.24 255.60 6,896.94	749.76 2,641.20 1,380.24 4,447.44 289.68 1,226.88	3,207.78 1,380.24 340.80 485.64 5,414.46	1,567.68 1,354.68 289.68 3,212.04	1,563.42	1,593.24	285.42 170.40 455.82	8,111.04			2,615.64	
	(421) NPW	4 2 4 4 2 5 6 4 4 2 6 6 4 2 6 6 6 6 6 6 6 6 6 6 6 6	4 26 4 26 4 26 4 26	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	4.26 4.26 4.26	4.26 4.26 4.26	4.26	4.26	4.26	4.26			4.26	
	Total	3,743.10 36,134.58 19,739.58 10,623.96 2,623.20 11,630.40 84,494.82	3,743.10 17,804.97 19,739.58 10,623.96 1,967.40 53,879.01	5,771.04 20,329.80 10,623.96 34,229.76 2,229.72 6,978.24 80,165.52	24,690 87 10,623 96 2,623 20 2,762 22 40,700 25	12,066.72 10,427.22 2,229.72 24,723.66	12,033.93	12,263.46	2,196 93 1,311.60 3,508 53	62,432.16 62,432.16			20,133.06	
	SIR	41.59 32.79 32.79 32.79 24.23	41.59 32.79 32.79 32.79	32.79 32.79 32.79 32.79 24.23	32.79 32.79 32.79 24.23	32.79 32.79 32.79	32.79	32.79	32.79 32.79	32.79			32.79	
	(150) Hours	90.00 1,102.00 602.00 324.00 80.00 480.00 2,678.00	90.00 543.00 602.00 324.00 60.00 1,619.00	176.00 620.00 324.00 1,044.00 68.00 2,520.00	753 00 324 00 80 00 114 00 1,271 00	368.00 318.00 68.00 754.00	367 00 367 00	374 00	9,583.00 67.00 40.00 107.00	1,904.00	2,011.00	11,594.00	614.00	12,208.00
		ORE GER	CONC CINC CINC CINC	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	REWH REWH REWH REWH REWH	RNC RNC RNC ON O	ESH	RLI	djustment REWH RNC	CICR			PAYS	
		Director PM Commercial CEP Analyst CEP Analyst Rate Analysts Clerk Total	Director PM Commercial CEP Analyst CEP Analyst Rate Analysts Total	PM Commercial CEP Analyst CEP Analyst CTAD Rate Analysts Clerk Total	PM Residential CEP Analyst Rate Analysts Clerk Total	PM Residential CEP Analyst Rate Analysts Total	PM Residential Total	PM Residential Total	Focal HECO Update Adjustment CEP Analyst REWH RNC	C&I Engineer	Total	Grand Total	PAYS CEP Analyst	Total with PAYS
	Line	-284881	8 9 10 11 13 13	4	22 23 24 25 25	26 27 28 29	30	33	35 36 37	38	40	41	42	44
														44

lar employee DSM Position

Note:

Amount (A) \$674,291.27 Source

The above information was provided to the parties during the settlement process, as HECO T-9, Attachment 2, along with the Company's original settlement proposal, dated August 14, 2007.

\$543,458.62 See HECO 2007 Test Year Rate Case – Stipulated Settlement Letter; filed September 6, 2007.

<u>\$130,832.65</u>
Difference = The DSM program labor and associated corporate administration and employee benefit costs and payroll taxes (for employees that spent a small portion of their time on DSM programs) that also remained in base rates.

#### **CERTIFICATE OF SERVICE**

I hereby certify that I have this date served a copy of the foregoing MOTION TO ADJUST

#### INTERIM INCREASE, MEMORANDUM IN SUPPORT OF MOTION, EXHIBITS 1-4,

together with this Certificate of Service, by hand delivery and/or by mailing a copy by United

States mail, postage prepaid, to the following:

Division of Consumer Advocacy Department of Commerce and Consumer Affairs 335 Merchant Street, Room 326 Honolulu, HI 96813

Randall Y. K. Young Associate Counsel (Code 09C) Naval Facilities Engineering Command, Pacific 258 Makalapa Drive, Suite 100 Pearl Harbor, HI 96860-3134

Dr. Khojasteh Davoodi, P.E. EFACHES NAVFAC HQ ACQ-URASO 1322 Patterson Avenue, S.E. Suite 1000 Washington Navy Yard Washington, D.C. 20374

DATED: Honolulu, Hawaii, May 21, 2008.

THOMAS W. WILLIAMS, JR.

PETER Y. KIKUTA DAMON L. SCHMIDT

Attorneys for HAWAIIAN ELECTRIC COMPANY, INC.